Mr. LONG. Well, what is considered in business to be a good savings/investment ratio? Have you looked into business firms to see how they operate?

They operate much more conservatively than this, don't they?

Colonel MORROW. Sir, I don't know. I don't know if they use the term savings/investment ratio.

Mr. LONG. They have some kind of ratio, cost/benefit ratio, or what have you. Any business would be insane to make an investment without getting some idea of what their return was going to be, and that is what we are talking about.

Colonel MORROW. Yes, sir. I think primarily they look to amortize their investments within a 3- to 5-year period.

Mr. LONG. What do we do?

Colonel MORROW. On the average, sir, about 2.7. We have some projects that go over 3 years and some that are quite substantially less than 3 years.

Mr. LONG. Do you figure on getting the whole benefit back in 3 years?

Colonel MORROW. Yes, sir.

Mr. LONG. The whole cost back in 3 years?

Colonel MORROW. Yes, sir. We would amortize the total investment cost.

Mr. LONG. Well, would a 3-to-1 ratio do that, 3 years?

Colonel MORROW. Yes, sir, it would.

Mr. LONG. I am not quite sure I follow that.

Colonel MORROW. Sir, for amortization purposes we actually use discounted dollars. A 3-to-1 savings/investment ratio would actually give us less than a 3-year amortization time period.

As you know, we discount very heavily, at a 10 percent annual rate, to indicate our savings, to portray our savings and bring them up to current year dollars, so this reduces our stated claims for savings quite substantially.

Mr. LONG. So your savings figure is already a heavily discounted figure?

Colonel MORROW. Yes, sir, it is, at a 10 percent annual rate.

Mr. LONG. When you make a 3-to-1 savings/investment ratio, how fast do you figure on getting the money back?

Colonel MORROW. It would be less than 3 years. I am not quite that fast in arithmetic.

Mr. LONG. The two 3's have nothing to do with each other?

Colonel MORROW. No, sir, they don't.

Mr. LONG. Of course, that is awfully good if you can get your whole investment back in 3 years.

Colonel MORROW. On the average this is what we are anticipating and we have every expectation of doing that. We have some that go over this, that we need for other purposes, but some go quite a bit under.

Mr. LONG. I wish you could explain that to me a little more convincingly in terms of a specific project. I hear what you say, but somehow I can't get my teeth into it.

Colonel MORROW. Sir, our economic analysis is to essentially postulate reasonable alternatives and cost amounts, so if we are already do-

ing the particular work we take the cost of doing that and continuing, doing that kind of work in the way in which we are doing it. We portray that one way. If we have to do things like make some temporary repairs in order to shore up the roof, we put that into the cost of continuing operation.

We contrast this cost of continuing operation to the capital investment plus the other costs of operating under our proposal and then we take the difference and we discount it on the basis of 10 percent annually to bring the savings back to current year dollars.

Mr. LONG. But your savings then are to some extent hypothetical, based on the theory of what it would have cost you to keep on operating this the old way.

Colonel MORROW. The projections, sir, are theory in a sense perhaps, but they are based on our historical evidence, historical fact.

Mr. LONG. Have you ever had any management people come in from business and tell you whether you are doing things in an approved fashion as far as business is concerned? Have they approved your guidelines and your ratios and all that?

Colonel MORROW. Yes, sir, we did, at the outset.

Mr. LONG. Who did that for you?

Colonel MORROW. It was Tate Technology.

Mr. LONG. Tate Technology?

Colonel MORROW. Yes, sir.

Mr. LONG. Is that a Maryland firm?

Colonel MORROW. I believe so, sir. I think they have changed their name, Tate Industries, I believe; or something of this sort, but they produced our first depot plant modernization program, package. They were under contract to the Air Force. They used both their private sector of industry expertise as well as experience gained doing similar work for the Navy and applied that methodology to developing our first program.

Mr. LONG. What about the GAO? Have they ever taken a look at these savings/investment ratios and commented on them?

Colonel MORROW. Yes, sir. Both your investigative staff and the GAO have looked at our projects on an individual basis. The GAO at the present time, sir, is investigating on their own, primarily looking at the Federal sector for capital investment to reduce operating cost.

Mr. Morris and some of his people have been out to some of our AMA's. They were briefed on our depot plant modernization about 3 months ago and they seemed to be very pleased with it, with the approach that we were taking.

Mr. LONG. That is subjective. Has the GAO ever commented on your guidelines, on your system of operation?

Colonel MORROW. I don't know that the GAO has, sir. I know that your staff investigators have.

Mr. LONG. They have?

Colonel MORROW. Yes, sir; they have.

Mr. LONG. I wonder if you would look into it and put in the record exactly who has done this and where they have commented on it? Would you?

Colonel MORROW. Yes, sir.

[The information follows:]

COMMENTS ON SAVINGS/INVESTMENT RATIOS

Your investigative staff made three reports on the adequacy of estimated cost savings used in support of facilities requested for modernization at Department of Defense depots that were included in the fiscal year 1973 military construction budget request. These reports were inserted in the fiscal year 1973 hearings published for this subcommittee. The reports specifically referred to the use of the savings-investment ratio in paragraph III, "Use of Economic Analysis as a Tool in Decisionmaking." The report substantiated the adequacy of the use of a savings-investment ratio as an appropriate economic indicator.

Also GAO case 93011 references as an advantage of the depot plant modernization program (DPMP) the identification of savings to investment ratio for each project. This review by the GAO was in conjunction with the joint project on Federal productivity sponsored by the Office of Management and Budget, the Civil Service Commission, and the GAO. The GAO team observations were made on their closing conference after a review of the DPMP at Tinker Air Force Base in February–March 1973.

PLATING SHOP

Mr. LONG. This 1.03 seems to be to me not a very happy ratio. Three to one I can understand, but 1.03 seems to me to be very marginal, especially when the staff looks into it, makes their adjustments, and comes down to 0.85.

How do you happen to approve a project where you are so close to breaking even on it?

Colonel MORROW. The 0.85 would not decrease the 1-to-1 ratio.

Mr. LONG. I understand the questioning here says 0.85.

Colonel MORROW. That was apparently made under a misunderstanding that we were going to justify an external mechanized materials handling system on the basis of this project. That system will be justified on its own merits. The ratio that exists for this particular facility is 1.03 to 1. We like a higher ratio also.

In this particular case there is a plating shop which should be replaced because of the conditions that we have there, the toxicity of the fumes, the corrosive aspects, the lack of adequate fume exhaustion. It has an old type overhead——

Mr. LONG. I understand, but why is there such a low ratio?

Colonel MORROW. In these cases, sir, it is very difficult to pin down hard, factual, quantitative savings.

Mr. LONG. When you get something that is a matter of health, does that go into your savings investment ratio?

Colonel MORROW. No, sir, we are unable to quantify that. For instance, sir, one of the factors that we removed from our savings investment ratios was the reduced insurance premiums. We had claimed this in the past and the investigative staff suggested we not do that because the Government does not pay insurance premiums.

We were trying to accommodate this particular point at the time.

General REILLY. Colonel Morrow, does not the new facility incorporate more extensive processes for meeting our environmental protection requirements than the old facilities?

Colonel MORROW. Yes, sir, without question. All the fumes from all the various solutions, and there are many different kinds, will be evacuated in a downdraft manner and pass through fume scrubbers and all the fumes will be removed.

Mr. LONG. I have used up quite a bit of time. I wanted to ask you some questions on encroachment, but perhaps we can talk about that later on.

ECONOMIC LIFE

Mr. DAVIS. On this 25-year recovery period, is that a matter of statute, or is that Defense Department regulations? How was that arrived at?

Colonel MORROW. Yes, sir; it is a Defense Department instruction that stipulates that for computing financial benefits, the economic life of equipment is 10 years and 25 years for facilities. We can only claim savings throughout that period and discount it back to the current year dollars.

One point, sir I might mention is, as was brought out the other day, that we had been claiming a residual value of an investment at the end of 25 years and the investigators agreed that they could look at a building 26 years old and realize that it did have residual value but they said it was inappropriate for us to claim this and put this on the credit side. We have to zero it out at the end of 25 years. So this is the way we develop our savings to investment ratio.

Mr. PATTEN. The Internal Revenue Service won't let you write off your fire proof, fire resistant buildings in 25 years, you know. They wouldn't let you. I had a big case on that. We put up a 10-story building, fire proof and fire resistant, and we wanted to write it off on a 25-year basis.

We would have saved income tax by a quicker write off. We were making a lot of money. They made us use 40 years. To tell the truth that building today is 40 years old and it is like brand new. That was well built in the depression and the finest of everything went into it and there isn't a piece of wood in the whole building, all brass fixtures on doors and all, all metal. It has been through all kinds of weather.

Colonel MORROW. If we were able to take the economic life to 40 years it would increase our savings benefit ratio.

Mr. DAVIS. I would think that this type of construction that we are talking about here, as a practical matter certainly, would be anticipated to have a useful life much beyond 25 years.

Colonel MORROW. Yes, sir; without question, sir.

Mr. DAVIS. That is all, Mr. Chairman.

Thank you.

HEALTH AND ENVIRONMENTAL FACTORS—PLATING SHOP

Mr. PATTEN. I do think that on the benefits here, regardless of the 1.03, it is obvious you feel in your heart that for the morale of the workers, for their health, for their comfort, and for a lot of other reasons you should proceed with this improvement. I should think if you are adding something to the record you ought to embellish some of the factors other than money.

In our Labor-HEW committee we are hearing a tremendous amount about compensation for these toxic effects on the health of workers and they are building up some case. This is going to be a new ball game for the chemical industry, for asphalt, and I could mention some of the others, all the others. So that you have many other factors. Just say

as man to man that you feel you ought to do this for the people who have to use the facility for all the reasons other than the dollar, General, and I think you ought to do it.

They are making you toe the mark on air and water pollution all the way through and you say you haven't shown any of those factors.

Colonel MORROW. No, sir, we don't cost them out.

Mr. PATTEN. You don't pay compensation. Well, I know industry is going to be forced to take a new look at what these doctors are saying is happening to these fellows working in a room full of dust, and chemicals, and everything else. They are really pinning it down today.

They are going to make a lot of changes. So I think you ought to embellish your report here with more than just a dollar sign if that is what is motivating you to proceed with this new facility.

General REILLY. It is one of the motivating factors.

[Editor's note: The Air Force had no further comments.]

Mr. SIKES. Thank you, Mr. Patten.

ROBINS AIR FORCE BASE, GA.

Mr. SIKES. Turn to Robins Air Force Base, in Georgia. Place page 33 in the record.

[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		ROBINS AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE LOGISTICS COMMAND	UHHZ	GEORGIA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1941	HOUSTON	ONE MILE EAST OF WARNER ROBINS, GEORGIA, EIGHTEEN MILES SOUTH OF MACON, GEORGIA

11. MISSION OR MAJOR FUNCTIONS

HEAVY BOMBARDMENT WING (STRATEGIC AIR COMMAND)

MOBILE COMMUNICATIONS GROUP (AIR FORCE COMMUNICATIONS SERVICE)

WARNER ROBINS AIR MATERIEL AREA DEPOT

AIR FORCE RESERVE COMMAND HEADQUARTERS

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	811	3,646	15,941	-	32	44	43	-	20,517
b. PLANNED (End FY 76)	797	3,764	15,187	-	32	44	43	-	19,867

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	7,055	217	166,847	167,064
b. LEASED AND EASEMENTS	192	36	0	36
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				167,100
d. AUTHORIZATION NOT YET IN INVENTORY	Excludes $328,400 Mobile Home Spades			9,073
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				4,868
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				20,000
g. GRAND TOTAL (c + d + e + f)				201,041

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE Priority b	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
116-665	Depot Aircraft Run-up Facility I		EA	2	240	2	240
211-11A	Add to and Alter Aircraft Protective Coating Facility I		SF	51,454	1,047	51,454	1,047
211-116	Add to and Alter Depot Aircraft Maintenance Hangars 11		SF	425,690	886	425,690	886
211-15B	Alter Materials Analysis Facility 12		SF	30,677	840	30,677	840
211-15E	Alter Depot Aircraft Overhaul Facility I		SF	306,000	1,352	306,000	1,352
811-14A	Advanced Logistics System Utility Support I		LS	LS	503	LS	503
	TOTAL				4,868		4,868

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ROBINS AIR FORCE BASE

The fifth of the Air Force Logistics Command bases being considered is Robins Air Force Base, located 18 miles south of Macon, Ga. The principal mission of this base is to support the Headquarters of the Warner Robins Air Materiel area. It also supports a Heavy Bombardment Wing of the Strategic Air Command; the Headquarters of the Air Force Reserve Command; and a Mobile Communications Group of the Air Force Communications Service. This request is for six projects amounting to $4,868,000.

The first project provides an aircraft runup facility for F–15 aircraft complete with supporting facilities and foundations for the installation of sound suppression equipment. There are no facilities at this base for this type aircraft.

The second project will provide an addition to and alteration of the existing aircraft protective coating facility. Painting cannot be accomplished in present facility 28 percent of the time due to temperature and humidity tolerances being exceeded.

The third project will add to and alter interior of maintenance hangars. Adequate space and appurtenances are required to provide a central utility system to which aircraft may be connected for overhaul rather than using many pieces of AGE equipment which are noisy, produce noxious fumes, and take up needed space.

The fourth project alters an existing materials analysis facility to provide adequate size, proper functional configuration, and environmental control. Workloads have doubled since 1961.

The fifth project alters the interior of an existing depot aircraft overhaul facility. Wooden structures have been erected within the aircraft overhaul and modification facility and must be removed to provide adequate flow lines.

The last item will provide alternate electric power supply, air conditioning, and associated utilities to support operation of advanced logistics system computer equipment.

AFLC—ROBINS AFB, GA.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Depot aircraft run-up facility	$19,300	100
Add to and alter aircraft protective coating facility	71,000	65
Add to and alter depot aircraft maintenance hangars	44,400	100
Alter materials analysis facility	50,700	100
Alter depot aircraft overhaul facility	52,500	100
Advanced logistics system utility support	24,600	25

Mr. SIKES. The request is $4,868,000 for an addition to and alteration of the aircraft protective coating facility, alteration of the aircraft overhaul facility, and other items.

Which of these projects are depot plant modernization program projects?

General REILLY. Mr. Chairman, all except the last item. Five of the projects are for depot modernization.

SAVINGS FROM DEPOT MODERNIZATION PROJECTS AT ROBIN AFB

Mr. SIKES. How many of them can be justified by savings alone?

Colonel MORROW. All, sir, excepting the aircraft runup facility.

Mr. SIKES. Provide for the record the summaries of the economic evaluations for these projects.

[The information follows:]

LOG

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 Jan 1973	1974		AF	ROBINS AIR FORCE BASE

5. PROJECT NUMBER	6. PROJECT TITLE
	211-11A ADD TO AND ALTER AIRCRAFT PAINT FACILITY

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: Provide controlled environment of Bldg 89 required for storing, mixing, applying, and curing of protective finishes on C-130, C-141, and F-15 Aircraft.

2. PROJECT BENEFITS ABSTRACT: Increased worker efficiency, centralized paint storage and mixing, and reduce rework and material usage with a resultant annual savings of $313,000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost (Includes 6% SIOH)	$1,094,000
	b. Supporting Facility Cost (Includes 6% SIOH)	6,000
	c. Initial Outfitting Equipment	0
	d. Design Cost (7% of a & b)	77,000
	e. Other Cost	0
	f. Total Costs	1,177,000
2.	VALUE OF EXISTING FACILITIES	$ 102,313
3.	NET INVESTMENT	$ 1,074,687
4.	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	906,924
	b. P.V. of Supporting Facility Cost	4,974
	c. P.V. of Initial Outfitting Equipment	0
	d. Design Cost	77,000
	e. P.V. of Other Cost	0
	f. Total P.V. of Investments	988,900
5.	PRESENT VALUE OF EXISTING FACILITY	$ 102,313
6.	P.V. OF NET INVESTMENT	$ 886,587
7.	SAVINGS/INVESTMENT RATIO	2.67

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$1,109,055	$948,091	$130,964
	b. Military	0	0	0
	c. Other	0	0	0
2.	OPERATING			
	a. Materials	430,079	332,571	97,508
	b. Flow Time	47,601	0	47,601
	c. Maintenance & Repairs of Equip	7,080	0	7,080
	d. Other	0	0	0
3.	OVERHEAD	0	0	0
4.	TOTAL ANNUAL SAVINGS	0	0	$ 313,153
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$ 2 982,469
5.	ONE TIME SAVINGS			53,144
5a.	PRESENT VALUE OF ONE-TIME SAVINGS			24,439
6.	TOTAL P.V. OF BENEFITS (BOD)			$ 3 006,908
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$ 2 369,444
8.	ECONOMIC LIFE 25 DISCOUNT FACTOR 10%		TABLE A .788 TABLE B 9.524	
9.	BENEFICIAL OCCUPANCY DATE (BOD) FY 1976			

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1. DAT	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 Jan 1973	1974		AF	ROBINS AIR FORCE BASE

5. PROJECT NUMBER	6. PROJECT TITLE
503-74-101	211-116 ADD TO AND ALTER DEPOT MAINTENANCE HANGAR

ECONOMIC EVALUATION - DOD INVESTMENT

1. DESCRIPTION OF PROJECT: Install centralized utility system for depot level repair of C-130, C-141 and F-15 aircraft.

2. PROJECT BENEFITS ABSTRACT: Increase functional effectiveness and improve facility utilization with resultant annual savings of almost $380,000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost (6% SIOH INCL.)	$706,000
	b. Supporting Facility Cost (6% SIOH INCL.)	$180,000
	c. Initial Outfitting Equipment	0
	d. Design Cost (7% of above)	$ 62,020
	e. Other Cost	0
	f. Total Cost	$948,020
2.	VALUE OF EXISTING FACILITY	0
3.	NET INVESTMENT	$948,020
4.	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$585,274
	b. P.V. of Supporting Facility Cost	$149,220
	c P.V. of Initial Outfitting Equipment	0
	d Design Cost	$62,020
	e P.V. of Other Cost	0
	f. Total P.V. of Investments	$796,514
5.	P.V. OF EXISTING FACILITY	0
6.	P.V. OF NET INVESTMENT	$796,514
7.	SAVINGS/INVESTMENT RATIO	3.18

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$5,324,962	$4,969,965	$354,997
	b. Military	N/A		
	c. Other	N/A		
2.	OPERATING			
	a. Maint of Equip	$67,715	$33,700	$34,015
	b. Maint of System	0	$10,000	($10,000)
3.	OVERHEAD			
4.	TOTAL ANNUAL SAVINGS			$378,012
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$3,000,556
5.	ONE TIME SAVINGS			$20,872
5a.	PRESENT VALUE OF ONE TIME SAVINGS			$20,872
6.	TOTAL P.V. OF BENEFITS (BOD)			$3,21 ,428
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$2,53 ,393

8. ECONOMIC LIFE 15 YEARS

DISCOUNT FACTOR 10%
TABLE A 0.788
TABLE B 7.980

9. BENEFICIAL OCCUPANCY DATE (BOD) July 1, 1975 (FY-76)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 Jan 1972	1974		AF	ROBINS AIR FORCE BASE

5. PROJECT NUMBER	6. PROJECT TITLE
	211-152 ALTER DEPOT AIRCRAFT OVERHAUL FACILITY

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: Install environmental controls in two aircraft support shops and second floor, north extension; construction of personnel service centers; and alter low bay hangar space to provide adequate aircraft repair facilities in Building 125.

2. PROJECT BENEFITS ABSTRACT: Will increase functional effectiveness, eliminate substandard support facilities, reduce transportation, allow for maximum facility flexibility, and update employee rest and break areas resulting in an annual savings of over $400,000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost (SIOH @ 6% Incl.)	$1,395,000
	b. Supporting Facility Cost (SIOH @ 6% Incl.)	58,000
	c. Initial Outfitting Equipment	0
	d. Design Cost (7% of a + b above)	101,710
	e. Other Cost	0
	f. Total Costs	1,554,710
2.	VALUE OF EXISTING FACILITIES	$ 132,322
3.	NET INVESTMENT	$1,422,388
4.	PRESENT VALUE (P V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$1,156,455
	b. P.V. of Supporting Facility Cost	48,082
	c. P.V. of Initial Outfitting Equipment	0
	d. Design Cost	101,710
	e. P.V. of Other Cost	0
	f. Total P.V. of Investments	1,306,247
5.	PRESENT VALUE OF EXISTING FACILITY	$ 132,322
6.	P.V. OF NET INVESTMENT	$1,173,925
7.	SAVINGS/INVESTMENT RATIO	2.21

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$21,827,589	$21,420,349	$407,240
	b. Military			
	c. Other	16,700	11,026	5,674
2.	OPERATING			
	a. Materials			0
	b. Utilities			0
	c. Maintenance & Repairs			0
	d. Other			0
3.	OVERHEAD			0
4.	TOTAL ANNUAL SAVINGS			$412,914
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$3,295,054
5.	ONE TIME SAVINGS			0
5a.	PRESENT VALUE OF ONE-TIME SAVINGS			0
6.	TOTAL P.V. OF BENEFITS (BOD)			$3,295,054
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$2,196,503
8.	ECONOMIC LIFE 15 YEARS DISCOUNT FACTOR 10%			TABLE A 0.788 TABLE B 7.980
9.	BENEFICIAL OCCUPANCY DATE (BOD) FY 1976			

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 JAN 1973	1974		AF	ROBINS AIR FORCE BASE
5. PROJECT NUMBER		6. PROJECT TITLE		
		ALTER MATERIALS ANALYSIS FACILITY		

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: Convert 22,277 SF in Building 165 to house equipment and personnel to accomplish increased laboratory workloads in support of depot repair and worldwide prime responsibilities.

2. PROJECT BENEFITS ABSTRACT: Provide increased capability to test/analyze materials that affect the reliability of 50% of in-use weapon systems. Make existing facility compatable with environmental control requirements of existing test equipment and analysis procedures.

SUMMARY OF PROJECT COSTS - FORMAT A

1. INVESTMENT		
a. Primary Construction Cost (SIOH @ 6% Incl.)		$ 839,000
b. Supporting Facility Cost (SIOH @ 6% Incl.)		0
c. Initial Outfitting Equipment, Costs Not Included in Line Item		0
d. Design Cost (7% of a above)		58,730
e. Other Costs		76,435
f. Total Costs		974,165
2. VALUE OF EXISTING FACILITIES		N/A
3. NET INVESTMENT		$ 974,165
4. PRESENT VALUE (P.V.) OF INVESTMENTS		
a. P.V. of Primary Construction Cost	$ 695,531	
b. P.V. of Supporting Facility Cost	0	
c. P.V. of Initial Outfitting Equipment	0	
d. Design Cost	$ 58,730	
e. P.V. of Other Cost	60,231	
f. Total P.V. of Investments	814,492	
5. PRESENT VALUE OF EXISTING FACILITY		N/A
6. P.V. OF NET INVESTMENT		814,492
7. SAVINGS/INVESTMENT RATIO		2.95
8. YEARS TO AMORTIZE		2.55 Years

SUMMARY OF PROJECT BENEFITS - FORMAT B

	PRESENT	PROPOSED	ANNUAL SAVINGS
1. PERSONNEL			
a. Civilian	N/A	N/A	N/A
b. Military - N/A	N/A	N/A	N/A
c. Other - N/A	N/A	N/A	N/A
2. OPERATING			
a. Improved Production Efficiency			$ 382,653
3. OVERHEAD			$ 0
4. TOTAL ANNUAL SAVINGS			$ 382,653
4a. PRESENT VALUE OF ANNUAL SAVINGS			3,051,976
5. ONE TIME SAVINGS			0
5a. PRESENT VALUE OF ONE TIME SAVINGS			0
6. TOTAL P.V. OF BENEFITS (BOD)			$ 3,051,976
7. TOTAL P.V. OF BENEFITS (BASE YEAR, 1974)			$ 2,404,358
8. ECONOMIC LIFE 15 YEARS DISCOUNT FACTOR 10%			TABLE A .788 TABLE B 7.980
9. BENEFICIAL OCCUPANCY DATE (BOD) FY76			

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Page No. _____

AIRCRAFT RUNUP FACILITY

Mr. SIKES. What is the justification for the other one?

Colonel MORROW. Sir, we simply don't have any other way to run the aircraft up outside of a sound protection device. In the past we ran up lower thrust engines out in the open on vacant taxiways and runways. We can't do that with the F–15 aircraft. We have to tie it down and we would have to put some sort of a protective shield over it to reduce the noise.

Mr. SIKES. What is the schedule of equipment delivery for the depot aircraft runup facility?

General REILLY. The sound suppressor equipment for the aircraft runup facility at this location is scheduled for delivery in November 1974.

LOCATIONS OF PROPOSED FACILITIES

Mr. SIKES. I would like to see on the map where these facilities will be built.

Colonel MANSPERGER. Here is the aircraft runup facility, relatively close to where the aircraft will be overhauled, but out far enough so that we will not disturb too many people.

Mr. SIKES. What is the distance?

Colonel MANSPERGER. The exact distance there I would have to estimate. But our criteria for the aircraft runup facility sound suppressor is that we can operate within 250 feet of a man in the open for 8 hours without running the risk of damaging his ears and within 500 feet of a closed facility without creating a disturbance more than a normal shop/office.

Mr. SIKES. Now, you should have been able to read the scale and tell me show far it is.

Colonel MANSPERGER. They covered up the scale right here, sir.

Mr. SIKES. All right.

Provide it for the record.

[The information follows:]

Distance from the run-up facility to maintenance overhaul facilities is approximately 3,400 feet.

Distance to fuel/defuel/fuel test facilities is 500–700 feet.

After leaving the overhaul facility, the aircraft must be refueled before it can be run up. The run-up facility has been located adjacent to the fuel facilities for this reason.

Mr. SIKES. Where are the others located?

Colonel MANSPERGER. The protective coating facility is right here and the aircraft overhaul facility and hangar projects are right in this area here. The materials analysis facility is right here.

PROJECTS RELATED TO F–15

Mr. SIKES. All right. Which of these projects are related to the maintenance of the F–15?

General REILLY. Mr. Chairman, all will be some extent, is that correct, Colonel Morrow?

Colonel MORROW. Yes, sir; they will all be employed with work from the F–15 but there is only one dedicated to that aircraft and that is the aircraft run-up facility. That is the only one solely dedicated to the F–15 aircraft.

Mr. SIKES. Have you restudied the economics of assigning the F–15 overhaul to Robins?

Colonel MORROW. No, sir, Mr. Chairman, we have not restudied the economics. The F–15 has yet only about 40 percent been assigned. The airframe is assigned to Warner-Robins. The engine is presently assigned to Kelly. The balance of the components will be assigned in accordance with the technology repair center concept.

The placement of the F–15 at Robins was based on its ability to accommodate it at no additional cost, other than what would be entailed elsewhere.

Mr. SIKES. When will the F–15s come into Robins for repair?

Colonel MORROW. In fiscal 1975, sir.

Mr. SIKES. When will the bulk of the workload start?

Colonel MORROW. In fiscal 1977, sir.

Mr. SIKES. Then do you need these facilities now?

Colonel MORROW. Yes, sir, we need the facilities now to be ready for the aircraft when it gets into the operational fleet in November of this next year, 1974.

Mr. SIKES. One of your justification sheets says the base has no fighter engine run-up facilities. How long has it been since Robins repaired fighters?

Colonel MORROW. The late 1950's.

Mr. SIKES. I remember the testimony last year discussing the assignment of the F–15 to Robins. I believe it was stated that Robins had the capability to repair fighters and that this was taken into account in assigning the workload here, but if you haven't repaired fighters since—when? 1950?

Colonel MORROW. Late 1950's. 1958, I think was the last year they had it.

Mr. SIKES. Does this capability still exist at Robins?

Colonel MORROW. Yes, sir. The skills are comparatively similar to those required for present workloads. I believe the question last year related to F–15 airframe workload, which is completely alien to Robins Air Force Base. In the past, Robins has been overhauling cargo aircraft airframes.

Mr. SIKES. I think that was a discussion of putting it here versus putting it in other bases where you had ongoing fighter repair work.

Colonel MORROW. The only way we could put it at another location would be to move an appropriate amount of work out of that location. Robins could accommodate the workload and had previously accommodated fighter type aircraft. We didn't believe that there would be any dramatic change caused by introducing the F–15 at Robins.

Mr. SIKES. What is the current workload at Robins? Is that the C–130's?

Colonel MORROW. Yes, and C–141 airframes.

Mr. SIKES. The technology for repairing those types of aircraft is very similar.

Colonel MORROW. Yes, sir, the airframe workload would be very similar. As long as they have the physical composition, the building structures themselves will accommodate the aircraft. That is the main thing and they will accommodate them at Robins.

Mr. SIKES. Doesn't it cost you something to retrain people to work on a more sophisticated fighter airframe, swept wings, and so forth? These represent real technical problems.

Colonel MORROW. The technical complexity is not necessarily increased from an airframe standpoint.

Mr. SIKES. It is on a swept wing aircraft.

Colonel MORROW. Very little. Actually most of our aircraft are fairly complex at the present time, including the C–141 which is a swept wing aircraft also.

Mr. SIKES. Will you require cold soak facilities such as you have at McClellan in order to properly test the F–15?

Colonel MORROW. Your question was, "Will we require cold soak facilities for the F–15?"

Mr. SIKES. Yes.

Colonel MORROW. No, sir, we will not require a coal soak facility at all for the F–15.

Mr. SIKES. What about any other similar highly technological testing which will be associated with airframe repair?

Colonel MORROW. Not that we see at the present time, no, sir.

EXTENT OF REPLACEMENT OF F–4 WITH F–15 AIRCRAFT

Mr. MCKAY. You said that the F–15 is coming on line next year, what does that do for the F–4? Does that then begin to move it out of the fleet and mothball it?

General REILLY. Colonel Reed.

Mr. MCKAY. Put it on the retired list?

Colonel REED. No, sir, the F–4 stays in the inventory. There is some reduction in the older model in the outyears. We are talking 1977, 1978 time frames. The F–4 as a basic weapon system stays in the inventory and does not move out.

Mr. MCKAY. Isn't the F–15 to replace the F–4 eventually?

Colonel REED. Not a 1-to-1 basis, no, sir. There is some reduction particularly in the older C-type model aircraft but there is no 1-for-1 ratio in the reduction of the aircraft. We can provide numbers for the record if you desire.

Mr. MCKAY. I would appreciate that.

[The information follows:]

EXTENT OF REPLACEMENT OF F–4 WITH F–15 AIRCRAFT

The following data reflects the active duty operational fighter aircraft programmed to be assigned to tactical units. It excludes training and reserve forces aircraft.

	Fiscal year—				
	1974	1975	1976	1977	1978
F–4	1,044	[Deleted]			
F–15	0				

EFFECT OF TECHNOLOGY REPAIR CENTERS ON FISCAL YEAR 1974 PROJECTS

Mr. SIKES. Under the TRC concept, Warner-Robins Air Material Area will have the largest increase in man-years employed in TRC's. Will there be much impact of the TRC's implementation on the projects you are requesting here? How do you know?

Colonel MORROW. Warner-Robins Air Materiel Area will have the largest net increase of work under the Technology Repair Center (TRC) concept but its total TRC workload will not be as large as several of the other AMA's. There will be a negligible impact of the TRC implementation on the projects we are requesting. The study group which recommended the TRC approach looked very carefully at facilities at WRAMA and elsewhere. It concluded that projects being requested were essential to the economic operation of the workload already assigned to WRAMA and the facilities could effectively accommodate the new workload without additional modification.

LOW PRIORITY PROJECTS

Mr. SIKES. The projects for a materials analysis laboratory and the alteration of the depot aircraft maintenance hangars were not authorized last year. They are in the bottom 20 percent of the program this year. That would indicate that they may not be very urgent. Do you want to discuss that?

Colonel MORROW. Sir, In any priority scheme it is simply a matter of relative placement. We believe that they are needed, they are necessary, to effect efficient operation of our depots and particularly here at Warner-Robins.

Mr. SIKES. Will they be needed more next year than they are this year?

Colonel MORROW. If the deterioration continues, yes, sir, we would anticipate they would be needed more next year.

Mr. SIKES. Are there questions on Robins?

COMPARISON WITH PRIVATE INDUSTRY

Mr. PATTEN. Just a general question.

Do you have any comparison of how good a job you do in logistics, in taking care of your equipment and in overhaul, as compared to private industry? These commercial airplanes fly continuously for the commercial airlines. There must be a lot of relative figures because they must have to work on their engines and they must have to collaborate. They must need proper facilities.

Just off the top of your head do you have a feeling how you look compared to the industry?

Colonel MORROW. Sir, we think that the comparisons are very favorable. Our primary reason, as you know, sir, for keeping the in-house organic capability is for responsiveness during wartime.

We think that the private sector of industry is very capable and turns out good products and we believe we do the same thing in the depots. We are unable to make any individual comparison where one is substandard and the other is better.

The nature of the Government-owned and operated facilities is such that the responsiveness is a little shorter and a little faster, and quicker, because we have a captive concern to operate with, but as far as the quality of the product we make there is no comparison there other than favorable.

Mr. PATTEN. I believe the clerk has some questions.

ASSIGNMENT OF F–15 WORKLOAD TO ROBINS

Mr. NICHOLAS. You stated earlier that the placement of the F–15 at Robins was based on its ability to accommodate it at no additional costs, other than what would be entailed anywhere. If the costs are the same elsewhere, as this implies, this still leaves us guessing as to why you assigned this new fighter aircraft to Robins which hasn't repaired fighters since the late 1950's. Provide for the record the steps you actually went through in deciding to assign this to Robins and show what other alternatives were specifically considered and why they were rejected.

[The information follows:]

JUSTIFICATION FOR ASSIGNING F-15 OVERHAUL TO ROBINS

There are a number of considerations which must be taken into account in the assignment of an important workload. Certainly paramount among these are: the capability to fully respond in a timely manner to the support requirements of the particular weapon system under consideration, the assurance of no adverse impact on support responsiveness for other first line weapon systems, the maintenance of technical competency in each of the depots for engineering and technical assistance to the operational forces, and the appropriate balance of workload to assure capability to readily respond to surge requirements for repair of engaged weapon systems during military contingencies. Economic considerations are important when all other factors equate out or when cost at a particular site is so great that it becomes prudent to override other supportive factors. In the case of the F-15 assignment, a combination of the dominant considerations mentioned above singled out Robins as the desirable location and cost did not argue against that judgment.

In reaching the decision regarding placement of the F-15 aircraft workload, the following steps were taken:

a. Timely response to F-15 support requirements: While all five AMAs possessed the necessary technical expertise to satisfy this criterion, the others were projected to have this capability preoccupied with other high priority workload while Robin's capability was projected to be more unhampered.

b. Assurance of no adverse input on support of other first line weapon systems: With a smaller airframe workload than the other depots the chances of adversely impacting other priority workload was minimized at Robins. Continued support of the largest number of first line aircraft at any single installation will still be required with the F-4 at Hill. The assignment of the A-7 aircraft as well as continued heavy commitment for B-52 support provides the emphasis on aircraft workload at Tinker. C-5 and B-52 work will continue at Kelly and F-111, FB-111 and other fighter support will be provided by McClellan. Support for none of these critical programs can be even slightly jeopardized.

c. Maintenance of Technical Competence at each Depot: Assignment of the A-7 to Tinker along with the responsibility for many modifications to the B-52 assure continuing technical competency to that AMA. With the latest model of the Air Force's first line fighter, the F-4, still coming off the production line plus the sophisticated modifications planned for that aircraft, technical competency remaining at Hill is assured. The increasing C-5 workload along with that from the B-52 provides this same effect at Kelly as does the F-111 and FB-111 for McClellan. Assignment of the F-15 to Robins provides the same assurance of continued technical competency for that AMA.

d. Assurance of capability to respond to surge requirements: The increased workload involved with the primary systems during a peace to war (mobilization) transition is approximately as stated below: (Does not include the F-15 for which such an increase cannot be developed at this time).

For Hill - approximately 75% increase in the workload of the engaged (combat) systems.
For Tinker - approximately 73% increase for the engaged systems.
For McClellan - approximately 71% increase for the engaged systems.
For Kelly - approximately 82% increase for the engaged systems.
For Robins - approximately 67% increase for the engaged systems.

The difference in the relative role depicted above is not overly significant but in the interest of maintaining a balance this factor also favored Robins in assignment of the F-15.

e. Costs: As stated elsewhere, since the cost of accepting the F-15 aircraft workload would be approximately the same at any depot, it was not a determining factor in the workload assignment.

Summary. Considering all the factors above, the logical choice for assignment of the F-15 aircraft workload was Robins.

Mr. NICHOLAS. I would like some more specifics on what all the costs of starting up F–15 repair at Robins will be, the training costs, the costs of equipment and tools, the total military construction, minor construction, O. & M. and industrial fund costs for construction. Will you please provide that for the record for Robins. Also show what these costs would be at Hill and at Tinker which are bases which have major fighter repair assignments.

[The information follows:]

Costs for personnel training associated with F–15 aircraft repair at Robins will total approximately $178,500. This training will take approximately 119 man-months and will entail courses on such subjects as aircraft environmental system repair technician, weapons system mechanic, aircrew egress system repairer, aircraft fuel system technician, aircraft maintenance technician, and airframe repair technician.

Since this training is on the peculiar requirements of the F–15 aircraft, approximately the same amount and cost of training would occur at either Tinker or Hill if the F–15 were placed there.

Tools and equipment used on the F–15 fall into two general categories: common use and peculiar equipment. Common use equipment is that which is not unique to any particular aircraft but may be used on all. This equipment consists of such items as lathes, boring machine, planes, heat treat, plating shop equipment, welding and digital analysis test equipment. This equipment is replenished through the DPMP and none is being obtained specifically for the F–15. The 5-year DPMP (fiscal years 1972–76) will invest in common use equipment as follows: Robins, $15 million (primarily for airframes and accessories); Tinker, $45 million (primarily for engines and airframes); and Hill, $18 million (primarily for airframes and accessories). Total peculiar equipment costs for depot level maintenance is not yet definitized, but the costs would be identical for either of the three bases since by definition no existing common use equipment could do the job.

The only military construction cost associated with the F–15 at Robins is $240,000 for the depot aircraft runup facility included in this year's request for appropriation. This same cost would be entailed at either Hill or Tinker if the F–15 airframe workload were placed there. Additional construction costs would not be anticipated at either depot to accommodate the F–15 airframe workload.

Mr. NICHOLAS. You said that the only way that the F–15 could be assigned to another base would be to move an appropriate amount of work out. Can you provide for the record the airframe workloads for fiscal years 1973 through 1977 at Robins, Hill, and Tinker for the record? Also provide for the record the flying hours and numbers of aircraft scheduled for the aircraft for which airframe overhaul is done at Robins, Hill, and Tinker through 1979.

[The information follows:]

AIRFRAME WORKLOADS AND NUMBER OF AIRCRAFT OVERHAULED AT ROBINS, HILL, AND TINKER

Following is a depot level maintenance workload on airframes and total depot level maintenance workloads at Hill, Tinker, and Robins Air Force Bases for fiscal years 1973–77.

HILL AFB

[Million man-hours]

Name of aircraft	Fiscal year— 1973	1974	1975	1976	1977
F-4C	0.722	0.512	0.587	0.520	0.520
F-4D	.628	.576	.398	.319	.319
F-4E	.682	1.853	1.653	1.565	1.565
RF-4C	.545	.567	.498	.388	.388
Other nonprogramed	.758	.250	.250	.250	.250
Total airframe	3.335	3.758	3.385	3.042	3.042
Total depot workload	8.433	9.082	8.846	8.479	8.479

TINKER AFB

A-7	0.185	0.662	0.685	0.753	0.753
B-52G	1.644	2.017	2.461	2.096	2.096
C-135	.505	.510	.362	.324	.324
Other nonprogramed	.104	.149	.149	.149	.149
Total airframe	2.438	3.338	3.657	3.322	3.322
Total depot workload	11.717	11.070	10.325	9.900	9.837

ROBINS AFB

C-130	1.195	1.197	1.057	.969	.969
C-141	1.252	1.075	1.222	1.222	1.222
F-15	0	0	.028	.078	.078
Other nonprogramed	.603	.132	.132	.132	.132
Total airframe	3.050	2.404	2.439	2.401	2.401
Total depot workload	7.663	7.619	7.738	8.086	8.128

Note: Flying hours and numbers of aircraft by type are classified Secret and are supplied separately.

F/RF–4, F–15, B–52G, A–7, C–130 SERIES, C–141, C–135 SERIES OPERATIONAL ACTIVE (OA) AIRCRAFT AND FLYING HOURS AS SHOWN IN THE PRESIDENT'S BUDGET SUBMISSION[1]

Aircraft type	Fiscal year 1974		Fiscal year 1975		Fiscal year 1976		Fiscal year 1977		Fiscal year 1978		Fiscal year 1979	
	Number of OA	Flying hours	Number of OA	Flying hours	Number of OA	Flying hours	Number of OA	Flying hours	Number of OA	Flying hours	Number of OA	Flying hours
F–4C	268	75, 137	[Deleted.]									
F–4D	466	140, 391										
F–4E	575	182, 702										
RF–4C	325	101, 130										
Total, F/RF–4	1, 634	499, 360	[Deleted.]									
F–15	14	98	[Deleted.]									
B–52G	167	85, 280										
A–7	333	84, 654										
C–141	254	337, 600										
C–130 series	671	487, 525										
C–135 series	712	339, 294										

[1] Includes all active and reserve forces. These do not translate directly to organic depot airframe support requirements due to modifications, changes in overhaul requirements, number supported by contract, etc. This is particularly true in the case of the C–130 and C–135 series of aircraft.

Mr. NICHOLAS. It would appear from your workload projections that the F–15 might be accommodated at Hill or Tinker without overloading the facilities. Why do you say that other work would have to be moved out?

Colonel MORROW. There are two very important considerations which must be taken into account in the assignment of workload to a depot. The depot workload should be designed to achieve maximum economy during peacetime and to assure adequacy of wartime surge response. To place the F–15 workload at either Tinker or Hill would not be desirable from either standpoint. Workloading significantly in excess of 85 percent of capacity (one-shift basis) for other than temporary short-term requirements results in reduced economy. While there are exceptions to this rule, the continued use of multiple shifts and overtime results in higher operating costs. Also, since normal peacetime workload would already be using a substantial portion of the margin left for surge requirements, ability to meet actual contingencies would actually be degraded. For these reasons if a substantial additional workload were to be placed at Hill or Tinker while other factors remained constant, it would be economically and militarily prudent to move a corresponding amount of work out.

Mr. NICHOLAS. Provide for the record the maximum airframe workload which these bases have accommodated in the last 8 years?

[The information follows:]

MAXIMUM AIRFRAME WORKLOAD AT HILL AND TINKER FOR LAST 8 YEARS

The maximum airframe workload accommodated in the last 8 years at Hill and Tinker is as follows: Hill, fiscal year 1971, 4,326,000 man-hours; Tinker, fiscal year 1971, 4,279,000 man-hours.

TINKER AIR FORCE BASE, OKLAHOMA

Mr. SIKES. Take up Tinker Air Force Base.

Place page 40 in the record.

[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		TINKER AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE LOGISTICS COMMAND	WWYK	OKLAHOMA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1942	OKLAHOMA	EIGHT MILES SOUTHEAST OF OKLAHOMA CITY, OKLAHOMA

11. MISSION OR MAJOR FUNCTIONS

MOBILE COMMUNICATIONS GROUP (AIR FORCE COMMUNICATIONS SERVICE)

TACTICAL FIGHTER GROUP (RESERVE)

OKLAHOMA CITY AIR MATERIEL AREA DEPOT

COMMUNICATIONS COMPUTER PROGRAM CENTER (AIR FORCE COMMUNICATIONS SERVICE)

12. PERSONNEL STRENGTH (Includes Oklahoma City AFS)

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	587	2,817	22,005	0	38	108	56	0	25,611
b. PLANNED (End FY 76)	585	2,656	20,476	0	38	108	56	0	23,919

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	3,464	193	175,490	175,683
b. LEASES AND EASEMENTS	700	(8) 36	39	75
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				175,758
d. AUTHORIZATION NOT YET IN INVENTORY				10,569
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				15,666
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				40,000
g. GRAND TOTAL (c + d + e + f)				241,993

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. (a)	PROJECT TITLE (b) Priority	(c)	(d)	SCOPE (e)	ESTIMATED COST ($000) (f)	SCOPE (g)	ESTIMATED COST ($000) (h)
211-253	Depot Aircraft Electric System Components Overhaul & Test Facility I		SF	72,000	3,283	72,000	3,283
218-868	Alter Precision Measurement Equipment Facility 13		SF	19,714	243	19,714	243
441-758	Logistical Materials Storage Facility I		SF	360,000	5,431	360,000	5,431
510-001	Add to and Alter Composite Medical Facility 38		SF	68,000	3,879	68,000	3,879
811-14A	Advanced Logistics System Utility Support I		LS	LS	621	LS	621
812-225	Depot Electrical Distribution System 14		LS	LS	1,818	LS	1,818
911-146	Land		AC	187	391		
	TOTAL				15,666		15,275

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TINKER AIR FORCE BASE

The fifth base is Tinker Air Force Base, located 8 miles southeast of Oklahoma City, Okla. The primary mission of this base is to support the headquarters of the Oklahoma City Air Materiel Area. It also supports a reserve tactical fighter group, communications computer program center, and a mobile communications group of the Air Force communications service. This request is for six projects amounting to $15,275,000.

The first project provides for the construction of a depot facility, 72,000 sq. ft., for overhauling and testing aircraft electric system components. Now utilizing a portion of a depot maintenance hanger, this function has an excessively high rejection rate of close tolerance parts because of contamination. Contamination is inevitable considering the inadequate environmental control system. Machine tool vibration transmission by unstable floors makes accurate machine setups difficult to achieve and maintain, further contributing to facility unsuitability.

The second item alters an existing building to provide an adequate depot facility for precision measurement equipment. Alteration will reconfigure the building for optimum work flow and add adequate environmental control so that equipment calibration and certification can proceed without inordinate delays.

The third project is for construction of a logistical materials storage facility of 360,000 sq. ft. Twenty-three buildings presently house this activity of which four are considered adequate. Deterioration characterize the 17 inadequate substandard facilities, some in danger of structural failure. Proper location and configuration will measurably increase the efficiency of this activity.

The fourth project provides for addition to, and alteration of, an existing composite medical facility. Current medical needs greatly exceed the facility capability. The existing building designed and constructed to support a community with only 15 percent of the present patient loads forced expansion into substandard. inadequate, and old. deteriorated, temporary frame structures. Still overcrowding and treatment delays prevail.

The fifth item is for standby utility capability, electric power, and air-conditioning in support of the advanced logistics system computer equipment. Present service cannot insure continuous reliable operation in the event of outages. Increased capacity will permit shutdown of primary systems for maintenance and repair without interrupting computer operations.

The last project provides for upgrading and expansion of the base electrical distribution system. Currently the electrical distribution systems is operating at maximum capacity. Projected service demands cannot be accommodated with the existing system nor is there alternative service available in cases of component failure.

AFLC-TINKER AFB, OKLA.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Depot aircraft electric system components overhaul and test facility	$187,000	45
Alter precision measurement equipment facility	12,040	35
Logistical materials storage facility	327,000	40
Add to and alter composite medical facility	256,000	70
Advanced logistics system utility support	30,340	25
Depot electrical distribution system	110,000	95

Mr. SIKES. The request is for $15,275,000 for an electric system components overhaul and test facility, a logistic materials storage facility, addition to the medical facility, and other items.

Which of the projects here are depot plant modernization program projects?

General REILLY. Mr. Chairman, four of the six—the first, the electric system components overhaul, the second, the precision measurement equipment facility, the third, the logistic material storage facility, and the fifth item, the depot electrical distribution system project.

Mr. SIKES. Which are justified on economics?

Colonel MORROW. All of the projects are justified on the basis of economics. I think that this fiscal year they are also needed for other essential considerations.

TECHNOLOGICAL REPAIR CENTERS REALINEMENTS

Mr. SIKES. Which will be impacted by the TRC realinements?

Colonel MORROW. The projects impacted by the TRC were programed in out years. Three of those have been eliminated and one reduced in scope, as a consequence of our technology repair concept. Some $3.6 million of projects that we were planning on at Tinker has been eliminated or reduced. None of the fiscal year 1974 projects that we have before the committee at the present time were impacted.

Mr. SIKES. You think that you are losing some functions on the TRC plan. Do you want to discuss that? Is that an economical or desirable thing?

Colonel MORROW. It is both desirable and economical. From the standpoint of the functions we are losing at Tinker, airborne instruments, missile components, landing-gear repair, we are centralizing those and consolidating similar kinds of work at other locations and we are moving that out of Tinker. This will allow Tinker to concentrate in the overhaul of engines, large aircraft airframes, certain instruments, and the alternator drive field.

LOGISTICAL MATERIALS STORAGE FACILITY

Mr. SIKES. Can you show us on a map where the logistical materials storage facility at Tinker will be located and how this ties in with shipping and receiving, freight, and other storage facilities?

Colonel MANSPERGER. This is the proposed siting of the materials storage facility (indicating). Here is the location of the logistical material processing facility. Here is the existing standard warehousing in which we have our small items and semiautomated retrieval system. Here is a gate so the truck traffic entering the gate can go directly to the in-processing and out-processing facility where items can be conveyed directly to the small-item warehouse or moved directly over to this warehouse. The air freight terminal is directly below this area.

The Precision Measurement Equipment Facility is here. The location of the Electrical System Component Overhaul and Test Facility will be here, and the hospital is in this area.

SAVINGS FROM MODERNIZATION PROJECTS

Mr. SIKES. Provide for the record summaries of the economic evaluations for the applicable projects here. Indicate whether they have been revalidated to reflect any workload shifts.

[The information follows:]

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION LINE ITEM DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 JUN 1973	1974		AF	TINKER AIR FORCE BASE

5. LINE ITEM NUMBER	6. LINE ITEM TITLE
10-74-102	DEPOT A/C ELECTRICAL SYSTEM COMPONENT OVERHAUL AND TEST FACILITY
	211-253 [redacted]

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: This project provides for construction of 72,000 SF of Constant Speed Alternator Drive Shop space. The building is to be permanent construction which will contain overhaul, repair, and testing facilities for alternator drives.

2 PROJECT BENEFITS ABSTRACT: The project will improve personnel productivity, reduce rejects, and improve flow time. An overall improvement in product quality will be realized extending the life of the product an estimated 7%. A total annual savings over $610,000 and a one-time savings of $4,640,000 is anticipated from this project.

SUMMARY OF PROJECT COSTS - FORMAT A

1	INVESTMENT	
	a. Primary Construction Cost	$2,765,000
	b. Supporting Facility Cost	518,000
	c. Initial Outfitting Equipment (MMHS & ATES)	2,936,000
	d. Design Cost	445,330
	e. Other Cost (Equipment Relocation)	117,000
	f. Total Costs	$6,781,330
2	VALUE OF EXISTING FACILITIES	$ 520,062
3	NET INVESTMENT	$6,261,268
4	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$2,292,185
	b. P.V. of Supporting Facility Cost	429,422
	c. P.V. of Initial Outfitting Equipment	4,089,848
	d. Design Cost	445,330
	e. P.V. of Other Cost	111,618
	f. Total P.V. of Investments	$7,368,403
5.	PRESENT VALUE OF EXISTING FACILITY	$ 520,062
6.	P.V. OF NET INVESTMENT	$6,848,341
7.	SAVINGS/INVESTMENT RATIO	1.30

SUMMARY OF PROJECT BENEFITS - FORMAT E

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$2,007,325	$1,596,315	$ 411,010
	b. Military - N/A			
	c. Other - N/A			
2.	OPERATING			
	a. Materials	$7,753,200	$7,553,000	200,200
	b. Utilities	14,373	17,196	(2,823)
	c. Maintenance & Repairs	117,428	112,855	4,573
	d. Other - N/A			
3.	OVERHEAD - N/A			
4.	TOTAL ANNUAL SAVINGS			$ 612,960
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$ 8,837,831
5.	ONE TIME SAVINGS			$ 4,640,000
5a.	PRESENT VALUE OF ONE-TIME SAVINGS			$ 4,426,560
6.	TOTAL P.V. OF BENEFITS (BOD)			$13,264,391
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$ 8,899,226

8. ECONOMIC LIFE 25 DISCOUNT FACTOR 10% TABLE A 0.867 TABLE B 9.524

9. BENEFICIAL OCCUPANCY DATE (BOD) FY 1975

LOG

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 JAN 1973	1974		AF	TINKER AIR FORCE BASE

5. PROJECT NUMBER	6. PROJECT TITLE
105-74-106	218-868 ALTER PRECISION MEASUREMENT EQUIPMENT LABORATORY

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: Alters the production support area of the Precision Measurement Equipment Laboratory to provide environmental controls and space for additional calibration operations.

2. PROJECT BENEFITS ABSTRACT: Increased productivity of the Precision Measurement Equipment Laboratory personnel resulting in an annual savings of over $60,000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost	$243,000
	b. Supporting Facility Cost	-0-
	c. Initial Outfitting Equipment	-0-
	d. Design Cost	17,010
	e. Other Cost (Equipment Relocation)	1,000
	f. Total Costs	$261,010
2.	VALUE OF EXISTING FACILITIES	$ -0-
3.	NET INVESTMENT	$261,010
4.	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$201,447
	b. P.V. of Supporting Facility Cost	-0-
	c. P.V. of Initial Outfitting Equipment	-0-
	d. Design Cost	17,010
	e. P.V. of Other Cost	
	f. Total P.V. of Investments	$219,411
5.	PRESENT VALUE OF EXISTING FACILITY	$ -0-
6.	P.V. OF NET INVESTMENT	$219,411
7.	SAVINGS/INVESTMENT RATIO	2.42

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$757,673	$714,126	$ 43,547
	b. Military - N/A			
	c. Other - N/A			
2.	OPERATING			
	a. Materials - N/A			
	b. Utilities	$ 265	$ 745	($ 480)
	c. Maintenance & Repairs	3,250	9,150	($ 5,900)
	d. Other - N/A			
3.	OVERHEAD	$317,398	$290,335	$ 27,063
4.	TOTAL ANNUAL SAVINGS			$ 64,230
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$611,727
5.	ONE TIME SAVINGS - N/A			
6.	TOTAL P.V. OF BENEFITS (BOD)			$611,727
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$530,357

8. ECONOMIC LIFE 25 DISCOUNT FACTOR 10% TABLE A 0.867
TABLE B 9.524

9. BENEFICIAL OCCUPANCY DATE (BOD) FY 1975

224

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 JAN 1973	1974		AF	TINKER AIR FORCE BASE
5. PROJECT NUMBER		6. PROJECT TITLE		
107-74-DSF		441-758 LOGISTICAL MATERIALS STORAGE FACILITY		

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: A depot warehouse (352,000 SF) to replace storage space in seven temporary wooden storage buildings (Bldg 14; 37,120 SF: Bldg 81; 99,200 SF: Bldg 86; 39,800 SF; Bldg 88; 99,200 SF: Bldg 93; 39,800 SF: Bldg 469; 16,896 SF: Bldg 200; 35,294 SF) and a Communications Computer Program Center (B422 & B423; 15,488 SF, a Red Cross Facility (B720), and a Youth Center (B418; 6,240 SF).

2. PROJECT BENEFITS ABSTRACT: Increases in personnel productivity, reduction of material damage and the avoidance of a major refurbishing project will result in an annual savings over $540,00 and a one-time savings over $3,000.000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost	$3,955,000
	b. Supporting Facility Cost	1,476,000
	c. Initial Outfitting Equipment	242,000
	d. Design Cost	397,110
	e. Other Cost	-0-
	f. Total Cost	$6,070,110
2.	VALUE OF EXISTING FACILITIES	$ -0-
3.	NET INVESTMENT	$6,070,110
4.	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$3,278,695
	b. P.V. of Supporting Facility Cost	1,223,604
	c. P.V. of Initial Outfitting Equip	337,106
	d. Design Cost	397,110
	e. P.V. of Other Cost	-0-
	f. Total P.V. of Investments	$5,236,515
5.	PRESENT VALUE OF EXISTING FACILITY	$ -0-
6.	P.V. OF NET INVESTMENT	$5,236,515
7.	SAVINGS/INVESTMENT RATIO	1.23

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian	$698,961	$625,386	$ 73,575
	b. Military - N/A			
	c. Other - N/A			
2.	OPERATING			
	a. Materials	$879,792	$439,792	$ 439,792
	b. Utilities - N/A			
	c. Maintenance & Repair	$ 43,992	$ 12,572	$ 31,420
	d. Other - N/A			
3.	OVERHEAD - N/A			
4.	TOTAL ANNUAL SAVINGS			$ 544,787
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$5,188,551
5.	ONE TIME SAVINGS - N/A			$4,811,762
5a.	PRESENT VALUE OF ONE TIME SAVINGS			$3,009,757
6.	TOTAL P.V. OF BENEFITS (BOD)			$8,198,308
7.	TOTAL P.V. OF BENEFITS (Base Year)			$6,460,266

8. ECONOMIC LIFE 25 DISCOUNT FACTOR 10% TABLE A 0.788 TABLE B 9.524

9. BENEFICIAL OCCUPANCY DATE (BOD) FY 1976

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
15 JAN 1973	1974		AF	TINKER AIR FORCE BASE

5. PROJECT NUMBER	6. PROJECT TITLE
101-74-DEE	812-225 ELECTRICAL DISTRIBUTION SYSTEM

ECONOMIC EVALUATION - DOD INVESTMENTS

1. DESCRIPTION OF PROJECT: Replacement of underground cables, transformers in secondary substations, and switchgear in both the distribution substation and distribution system serving two portions of Area "A".

2. PROJECT BENEFITS ABSTRACT: Conversion to 15 KV system will provide support for Depot missions and satisfy continued electrical demand requirements. This results in a one-time cost avoidance of over $6,830,000.

SUMMARY OF PROJECT COSTS - FORMAT A

1.	INVESTMENT	
	a. Primary Construction Cost	$1,773,000
	b. Supporting Facility Cost	45,000
	c. Initial Outfitting Equipment	-0-
	d. Design Cost	127,260
	e. Other Cost	-0-
	f. Total Costs	$1,945,260
2.	VALUE OF EXISTING FACILITIES	$ -0-
3.	NET INVESTMENT	$1,945,260
4.	PRESENT VALUE (P.V.) OF INVESTMENTS	
	a. P.V. of Primary Construction Cost	$1,469,817
	b. P.V. of Supporting Facility Cost	37,305
	c. P.V. of Initial Outfitting Equipment	-0-
	d. Design Cost	127,260
	e. P.V. of Other Cost	-0-
	f. Total P.V. of Investments	$1,634,382
5.	PRESENT VALUE OF EXISTING FACILITY	$ -0-
6.	P.V. OF NET INVESTMENT	$1,634,382
7.	SAVINGS/INVESTMENT RATIO	3.63

SUMMARY OF PROJECT BENEFITS - FORMAT B

		PRESENT	PROPOSED	ANNUAL SAVINGS
1.	PERSONNEL			
	a. Civilian - No Change			
	b. Military - No Change			
	c. Other - N/A			
2.	OPERATING			
	a. Materials - No Change			
	b. Utilities - No Change			
	c. Maintenance & Repairs - No Change			
	d. Other - N/A			
3.	OVERHEAD			
4.	TOTAL ANNUAL SAVINGS			$ -0-
4a.	PRESENT VALUE OF ANNUAL SAVINGS			$ -0-
5.	ONE TIME SAVINGS			$10,[illegible]94,820
5a.	PRESENT VALUE OF ONE-TIME SAVINGS			$ 6,[illegible]33,659
6.	TOTAL P.V. OF BENEFITS (BOD)			$ 6,[illegible]33,659
7.	TOTAL P.V. OF BENEFITS (BASE YEAR)			$ 5,[illegible]24,782

8. ECONOMIC LIFE 25 YR DISCOUNT FACTOR 10% TABLE A 0.867 TABLE B 9.524

9. BENEFICIAN OCCUPANCY DATE (BOD) FY-1975

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AIRCRAFT ELECTRICAL SYSTEM FACILITY

Mr. SIKES. What types of electrical systems will the $3,283,000 facility support?

Colonel MORROW. All the alternator drive work that we have within the Air Force is accomplished at Tinker Air Force Base.

Mr. SIKES. Are these related to one of the TRC's to be established at Tinker? Will this facility be properly sized? Can you readily add or delete space as required once it has been constructed?

Colonel MORROW. Yes; however, the work to be accomplished in this facility is unique to all the Air Force and has been and will continue to be all accomplished at Tinker AFB. It makes up a family group of its own. This repair and test activity is nearly completely self-sufficient in that it has minimum dependence on support shops and items received for repair come from the field. As such, TRC realinements do not affect this activity or the size of the facility which is of proper scope. It is designed to provide normal flexibility for adding or deleting space.

COMPOSITE MEDICAL FACILITY ADDITION AND ALTERATION

Mr. SIKES. What are the shortcomings of the present hospital at Tinker?

Colonel BAIRD. Mr. Chairman, Tinker Air Force Base has an undersized crowded base hospital.

Mr. SIKES. Built when?

Colonel BAIRD. It was completed in 1959. It does not meet the needs of the military community and their families at Tinker Air Force Base. It was constructed from a design which was completed in the mid-1950's when the emphasis was primarily on inpatient care. As the emphasis has shifted to outpatient care—and we have seen an increase of 10 percent in prescriptions per year and about 20 percent in lab procedures per year and gains in outpatient workload in general—we have found the facility becoming more crowded and delivery of health care inefficient.

Mr. SIKES. Looking at the statistics we have before us the purely military figure is relatively stable; dependents are up some but not a great deal. There is a fairly substantial increase in retired personnel. Where is the additional load coming from, retired personnel?

Colonel BAIRD. No, sir. The load has not increased. The capability to accommodate that load in the small facility is the problem. It is too crowded to accommodate that workload. We are putting more emphasis on people getting outpatient care. The inpatient part of the facility is perfectly adequate. It is the outpatient clinics and support spaces which are inadequate. We intend to add 50 percent to the outpatient clinic space and 90 percent to the support space like labs. We feel we will gain more efficiency and better delivery of health care in the larger clinics.

Mr. SIKES. The major numbers of military personnel at Tinker belong to missions other than the depot mission. Are these firm missions?

Colonel REED. Yes, sir. There are no planned changes to those missions. The AFLC mission is also projected to continue at basically the same level.

Mr. SIKES. Figures provided the staff indicate that your outpatient workload from 1968 to 1977 will stay about even. Why do you need more outpatient space? Provide that for the record.

[The information follows:]

NEED FOR INCREASED OUTPATIENT SPACE AT USAF HOSPITAL TINKER

The existing outpatient area was constructed under mid-1950 clinical practice criteria and concepts. It included 10 clinician work stations, which are outpatient units consisting of office and examination capabilities. Under mid-1970's modern concepts, this facility has been designed with 26 work stations, to care for the relatively constant outpatient workload. It has been designed with larger ancillary support services in recognition of the other measures of workload, laboratory procedures, X-rays, and prescriptions, which have markedly increased. The proposed design will eliminate overcrowding and inefficiencies so that the medical staff can deliver optimum health care to the military community in a modern and efficient health facility.

Mr. SIKES. Supply for the record workload data which support your contention that workload has increased since this hospital was constructed.

[The information follows:]

WORKLOAD DATA FOR USAF HOSPITAL TINKER

Calendar year	Outpatient visits	ADPL[1]	X-ray	Lab procedures[2]	Prescriptions
1960	120,641	38	27,815	88,332	85,319
1961	164,359	42	28,111	74,033	118,279
1962	185,087	53	31,577	70,733	135,437
1963	216,868	56	33,393	77,886	126,119
1964	228,941	58	37,187	80,794	137,308
1965	279,189	60	50,802	91,163	146,088
1966	321,599	55	63,439	100,544	160,492
1967	266,587	55	71,018	95,315	192,432
1968	210,963	48	69,225	95,960	221,383
1969	201,772	48	69,650	103,914	242,654
1970	213,313	51	65,325	213,407	228,363
1971	202,761	39	69,952	209,647	230,904
1972	190,673	36	80,038	258,201	243,905

[1] Average daily patient load.
[2] Laboratory specimens were reported prior to Jan. 1, 1970. Specimens and procedures are not equal units of measurement.

Mr. SIKES. Are there questions on Tinker?

Mr. PATTEN. You make the statement in the justifications this facility was designed and constructed in support of a community with less than 15 percent of the patient loads that are being experienced. That is one-seventh. In other words, you are saying that the patient load is seven times what this hospital was built for?

Colonel BAIRD. Yes, sir.

Mr. PATTEN. Is that a true statement?

Colonel BAIRD. Yes, Mr. Patten. That workload is a relationship of how many times an individual goes to see a doctor and how many times when an individual goes to see a doctor lab work is done. It used to be a man would come into a military hospital we would examine him, perhaps do lab work, perhaps give him a prescription and send him back to duty. Now we give him an X-ray and two or three lab lests. He may go to a specialist. We have expanded the care given to an individual. The demands per individual have increased.

Mr. PATTEN. That unit cost is up to $58. Every time I make a comparison I get into trouble, but for our outpatient care in our local situation we bought some housing across the street from the hospital and they are all happy with the arrangement. We have a lot of people now who do not have to come into the hospital and have no parking problem. There is greater access in what we call the rear, where there is less congestion. The hospital people tell me that they are very happy with the arrangement, and a good part of the outpatient work is being done in an adjoining frame building. If a fellow needs a specialist he will be referred to the main facility.

Colonel BAIRD. Yes, sir.

Mr. PATTEN. They are happy with the buildings that they have, which certainly are not any $60 a square foot.

Colonel BAIRD. We found it is more efficient and from the standpoint of maintenance and utilities to add to the present facility. This is a concrete structure. By adding to it, it also prevents patients from having to walk between buildings in the elements, Oklahoma dust storms and cold winters. It also eliminates the requirement to duplicate some of these facilities in an outbuilding. If we had X–ray only in the main building, a man who needed one would have to move between structures. This way he stays indoors and goes from one department to another.

Mr. SIKES. Are there further questions?

Dr. Long?

HOSPITAL CONSTRUCTION FOR RETIRED PERSONNEL

Mr. LONG. What percentage of the present medical facility is used by retired personnel?

Colonel BAIRD. We find that approximately 25 percent of our out-patient workload is generated by retired personnel. For this facility the additional request has only been designed to accommodate 5 percent of that under the DOD guidelines.

Mr. LONG. I am concerned that you are not supposed to build a new building to take care of retired people. We are looking at the West Point hospital situation, and I am convinced the Army tried to stretch cadet use to build a bigger facility for the retired community. I would hope that you are not doing that here.

What about other people: do you have anybody else besides retired personnel who are using this hospital at the present time, but for whom under law you could not build a new medical facility?

Colonel BAIRD. No, sir. The users of the facility are active duty and their families, dependents of retired, and retired military personnel.

Mr. LONG. Retired are the only ones?

Colonel BAIRD. Yes, sir, the only other category.

HOSPITAL BEDS IN OKLAHOMA CITY

Mr. LONG. What about the bed occupancy of the present facility?

Colonel BAIRD. The bed occupancy of the present facility is lower than the constructed capacity of the hospital and for this reason we are not requesting any other beds. We did do an analysis in the local area and did determine that the Oklahoma City area is short of beds. Therefore we did not recommend that we convert any of the bed spaces to any other use.

Mr. LONG. This bed occupancy business is peculiar. I have heard that Baltimore is short of beds, and I have heard Baltimore has far more beds than are used. It is kind of hard to reconcile that, to find the truth between such conflicting statements.

I have medical friends, and one at Hopkins tells me there is no problem of beds anyhere in the Baltimore area. That makes me wonder a little bit about Oklahoma. Why is Oklahoma different? As you well know all over the country hospitals are finding ways to get people out of the hospital sooner. Bed occupancies are declining even though populations which hospitals are serving are increasing enormously.

Colonel BAIRD. We addressed this point on each project. In this case we contacted the State Hill-Burton directors and they advised us that they have 2,098 beds in the area and require an additional 1,000 in Oklahoma City. For this reason we did not recommend any change in the bed status at Tinker.

Mr. LONG. You do have a surplusage of beds here?

Colonel BAIRD. Yes, sir, we do.

Mr. LONG. Can you take some of that space that you are not using for beds and use it for some of these other out-patient facilities that you need?

Colonel BAIRD. We addressed that question, sir, and on the basis of the Hill-Burton finding, Oklahoma City was short 1,000 beds. So we felt it unwise to alter any of that space at this time. We are only about 20 beds over requirement.

Mr. LONG. You are a military facility. Why do you have an obligation to round out or supplement or complement medical facilities of Oklahoma as a whole? That is not your responsibility.

Colonel BAIRD. We have a program called CHAMPUS, which authorizes dependents who can not be accommodated in military facilities to use civilian hospitals. Therefore, if we have inadequate beds for the dependents they must use CHAMPUS.

Mr. LONG. I though you said you did have adequate beds in your hospitals?

Colonel BAIRD. We do. But with the city short we don't feel we should reduce the number of beds we have. If we do get to the situation where we need them they will be available.

Mr. LONG. What is your bed occupancy?

Colonel BAIRD. The average load there is 32.

Mr. LONG. Percent?

Colonel BAIRD. 32 Beds.

Mr. LONG. Out of how many?

Colonel BAIRD. Out of constructed capacity of 75. We are allowed by DOD——

Mr. LONG. It is less than 50 percent?

Colonel BAIRD. Yes, sir.

We are allowed by DOD to retain an additional 18 beds for dispersion factor. This factor is on extra allowance for special circumstances. We may have a male and female for a 2-bed room, one bed is lost because we cannot put people of different sexes in the same room. There are also situations where a patient with a contagious disease must be isolated.

Mr. LONG. Things are getting stricter and stricter?

Colonel BAIRD. Yes, sir. It is not possible to put people with contagious diseases in a 2-bed room.

Mr. LONG. I understand that. But with the 18 beds, subtract 18 beds from the 75, is that what you said?

Colonel BAIRD. Yes, sir.

Mr. LONG. That would bring it down to 57. You are only using 32. You are still only using 32 beds out of a total of 57. Why doesn't that give you some extra room that you can use for other facilities, especially since it is likely that in the future hospital occupancy is going to continue to go down?

Colonel BAIRD. The national pattern is that way; yes, sir.

Mr. LONG. If that is so, it seems to me that we have got some room here without asking for more facilities. So far as the rest of Oklahoma City is concerned, I don't think that is your responsibility. I think you are stretching it.

Colonel BAIRD. We thought we should not eliminate a resource which is already built and ask the help of the community.

Mr. LONG. I don't think we are asking you to eliminate a resource but just converting and trying to save $4 million. I think that is an awful lot of money. $4 million is the cost that I see in come cases for 100-bed hospitals. Very close to it.

Colonel BAIRD. We don't build a hospital per se but a composite medical facility, which means beds plus large out-patient facilities.

Mr. LONG. All hospitals do?

Colonel BAIRD. No, sir. Most of the doctors have their offices in professional buildings. All of our doctors will have offices in our composite medical facility.

Mr. LONG. I must run into a very different type of hospital in Baltimore. All hospitals I see have out-patient facilities, very large ones.

Colonel BAIRD. Many have small out-patient facilities, unless they are teaching hospitals. Many will have emergency rooms. We have that, but also provide the doctors with their own offices in our hospitals. That is a unique difference.

Mr. LONG. Really, I just don't think you have made a case for this hospital which can stand on its own legs. You are putting one leg in the community and stretching it, and I request you take another look at that. I don't think you have justified this project.

General REILLY. Dr. Long, may I ask Colonel Baird what the peak bed requirements have been running as opposed to the average he is quoting.

Colonel BAIRD. I don't have a specific figure but the DOD prescribed computation validated the retention of this hospital as a 75-bed hospital.

Mr. LONG. You are just telling us this is not inconsistent with DOD rules. I think we ought to get a justification for this particular hospital on the basis of the facts and utilization of this particular hospital. I really think that you ought to come back here with some more figures. If you have a peak load, as the General says, that makes it necessary for you to have this number of hospital beds so that you can't convert part of it to out-patient, then let us see those figures.

Colonel BAIRD. All right, sir.

Mr. SIKES. You have heard the request. If you have additional information to support the facility, I suggest that you do so.

General REILLY. We would like to submit additional justification.

[The information follows:]

Inpatient space requirements for USAF Hospital Tinker were programed on the basis of a mathematical formula and a facility analysis.

The mathematical basis for programing was the projected average daily patient load of 33 patients plus a dispersion factor of 18 beds as authorized by DOD criteria to allow for beds rendered unusable due to a patient's age, sex, or condition, plus two beds as authorized by DOD as a 5 percent additive factor to support teaching and training. These calculations produced a mathematical programing base of 53 beds. Peak daily workload experience of 50 to 53 patients also validated the programing base.

The facility analysis indicated that many of the patient's bedrooms were inadequate with less than 100 square feet per bed. The four bed units and five bed units were re-rated to three and four bed units respectively, so that we can now provide adequate space per bed. The hospital's normal operating bed capacity was recomputed at approximately 60 beds. The facility analysis also showed that the crowded inefficient conditions in the clinics and the integral ancillary support services such as X-ray, laboratory, and pharmacy, could be relieved by an addition and alteration project in the outpatient area on the ground floor. This same analysis indicated that conversion of the building space presently used for inpatient health care to outpatient functions would not improve the operation of the hospital. In some cases greater inefficiencies in the movement of outpatients would result if outpatient facilities were dispersed throughout the floors of this multi-storied medical facility.

Wright-Patterson Air Force Base, Ohio

Mr. Sikes. Turn to Wright-Patterson and insert page 47 in the record.

[The information follows:]

1. DATE | 2. DEPARTMENT: AF

FY 19 74 MILITARY CONSTRUCTION PROGRAM

3. INSTALLATION: WRIGHT-PATTERSON AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU: AIR FORCE LOGISTICS COMMAND

5. INSTALLATION CONTROL NUMBER: ZFTV

6. STATE/COUNTRY: OHIO

7. STATUS: ACTIVE

8. YEAR OF INITIAL OCCUPANCY: 1917

9. COUNTY (U.S.): GREENE & MONTGOMERY

10. NEAREST CITY: ONE MILE WEST OF FAIRBORN, OHIO; FIVE MILES NORTHEAST OF DAYTON, OHIO

11. MISSION OR MAJOR FUNCTIONS

HEAVY BOMBARDMENT WING (STRATEGIC AIR COMMAND)

AIR FORCE RESEARCH AND DEVELOPMENT LABORATORIES (AIR FORCE SYSTEMS COMMAND)

AIR FORCE INSTITUTE OF TECHNOLOGY (AIR UNIVERSITY)

FOREIGN TECHNOLOGY DIVISION (AIR FORCE SYSTEMS COMMAND)

AIR FORCE LOGISTICS COMMAND HEADQUARTERS

AERONAUTICAL SYSTEMS DIVISION (AIR FORCE SYSTEMS COMMAND)

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	3,423	4,392	17,186	741	-	214	43	-	25,999
b. PLANNED (End FY 76)	3,335	4,590	16,824	741	-	214	43	-	25,747

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	7,921	1,476	283,551	285,027
b. LEASES AND EASEMENTS	614	(8) 89	3	92
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				285,119
d. AUTHORIZATION NOT YET IN INVENTORY Excludes Family Housing $13,783,000				10,010
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				19,551
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				45,000
g. GRAND TOTAL (c + d + e + f)				359,680

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
141-454	Addition to Technical Intelligence Operations Facility I	AFSC	SF	242,870	11,000	242,870	11,000
310-612	Alter Aircraft Engine Component Research Facility I	AFSC	SF	86,945	1,887	86,945	1,887
310-632	Aircraft Fuels and Lubricants Laboratory I	AFSC	SF	68,250	4,857	68,250	4,857
310-926	Add to and Alter Human Impact Laboratory Facility I	AFSC	SF	9,490	390	9,490	390
722-211	Airmen Dormitories 33		MN	194	1,117	194	1,117
811-14A	Advanced Logistics System Utility Support I		LS	LS	300	LS	300
	TOTAL				19,551		19,551

DD FORM 1390, OCT 70

CONGRESSIONAL

Wright-Patterson Air Force Base

The last Air Force Logistics Command location to be considered is Wright-Patterson Air Force Base, located 5 miles northeast of Dayton, Ohio. The primary mission of this base is to support the Headquarters of the Air Force Logistics Command. It also supports the Aeronautical System Division of the Air Force Systems Command; the Air Force Institute of Technology, Air University; a Strategic Air Command Heavy Bombardment Wing; and the Air Force Systems Command Foreign Technology Division. This request for six projects for $19,511,000 includes four projects for the Air Force Systems Command for $18,134,000.

The first project provides construction of 242,870 square feet as the second and final phase of the technical intelligence operations facility. Currently, the Foreign Technology Division is housed in nine overcrowded buildings of which seven are substandard. These structures are widely dispersed making efficient accomplishment of this vital task most difficult.

The second item is for alteration of an existing facility to provide an aircraft engine component research facility. Currently, the aeropropulsion laboratory has no facility to conduct compressor research.

The third construction project provides an aircraft fuels and lubricants laboratory of 68,250 square feet. Research is now fragmented throughout widely dispersed and inadequate facilities. Most cannot meet safety criteria and have inadequate environmental control.

The fourth project adds to and alters an existing human impact laboratory to house new test equipment. Alteration will encompass 4,570 square feet; the addition will be 4,920 square feet. The existing human impact facility can perform research in only the vertical plane. This construction adds space for installation of equipment which will permit proper horizontal testing.

The fifth item is for construction of a 194-man airmen dormitory. 40 percent of the assigned must now live in substandard, wood-frame, over 30-year-old-dormitories designed for a 10-year life expectancy. These structures are without wall or ceiling insulation, have inadequate lighting and environmental control, and provide poorly configured living areas.

The last project requested is for utilities support of Advanced Logistics System computer equipment. Present commercial power is not adequate to assure continuous operation. This project will provide adequate electrical and air-conditioning services to insure continuing operation should commercial power fail or should it require shutdown for maintenance and/or repair.

AFLC—WRIGHT-PATTERSON AFB, OHIO—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Addition to technical intelligence operations facility	$454,500	35
Alter aircraft engine component research facility	155,800	15
Aircraft fuels and lubricants laboratory	245,000	50
Add to and alter human impact laboratory facility	7,200	100
Airmen dormitories	60,000	45
Advanced logistics system utility support	14,650	25

Enlisted barracks summary, Wright-Patterson AFB, Ohio

	Men/Women[1]
Total requirement	1,434
Existing substandard	[2] 555
Existing adequate	[3] 842
Funded, not in inventory	0
Adequate assets	842
Deficiency	592
Fiscal year 1974 program	194
Barracks spaces occupied (average), March 31, 1973	1,007

[1] 90 square feet per man—permanent party E2–4.
[2] None upgradable.
[3] Includes 142 personnel in private housing.

Mr. SIKES. The request is for $19,551,000, including a large addition to the technical intelligence operation facility, for $11 million.

Mr. Davis, would you have some questions at this point?

SURVEYS AND INVESTIGATIONS STAFF REPORT ON TECHNICAL INTELLIGENCE OPERATIONS FACILITY

Mr. DAVIS. Thank you, Mr. Chairman.

We have had surveys and investigations staff report and I think that it would be appropriate to have Mr. Nicholas put in the record pertinent parts of that report here, subject to such comment as you would like to make in connection with it, General.

[The report follows:]

MAY 18, 1973.

MEMORANDUM FOR THE CHAIRMAN

Re military construction program for fiscal year 1974.
TECHNICAL INTELLIGENCE OPERATIONS FACILITY (FOREIGN TECHNOLOGY DIVISION) and
FUELS AND LUBRICANTS LABORATORY (AIR FORCE AERO PROPULSION LABORATORY), *Wright-Patterson Air Force Base, Ohio.*

By directive dated February 22, 1973, the committee requested that inquiry be made into the requirements and plans for an addition to a technical intelligence operations facility and a fuels and lubricants laboratory at Wright-Patterson Air Force Base, Ohio. These facilities are included in the fiscal year 1974 military construction program for the Air Force.

The inquiry has been completed and the results are included in this report.

Respectfully submitted.

C. R. ANDERSON,
Chief of the Surveys and Investigations Staff,
House Appropriations Committee.
L. R. KIRKPATRICK,
Director, Surveys and Investigations Staff,
House Appropriations Committee.

I. DIRECTIVE

By directive dated February 22, 1973, the committee requested that a study be made into the requirements and plans for an addition to a technical intelligence operations facility and a fuels and lubricants laboratory at Wright-Patterson Air Force Base (W-PAFB), Ohio.

The investigative staff was instructed that its inquiry should include, but not be limited to, a survey to determine if some or all of this work can be performed in existing facilities at W-PAFB; an analysis of the extent to which the research or operations to be performed are more closely related either to activities at W-PAFB or to those located elsewhere; the extent to which such research is being or could be conducted by private industry; the status of design for the facilities proposed; and the construction schedule for these facilities.

II. TECHNICAL INTELLIGENCE OPERATIONS FACILITY (FOREIGN TECHNOLOGY DIVISION), WRIGHT-PATTERSON AIR FORCE BASE, OHIO

A. Introduction

The military construction program of the Air Force for fiscal year 1974 includes a request for the appropriation of $11 million to construct an addition to a technical intelligence operations facility for the Foreign Technology Division (FTD) at W-PAFB. The requested project (phase II) involves the construction of a two-story northeast wing and an addition of a second floor to a northwest wing.

Phase I was approved and authorized by the Congress for fiscal year 1973, which provided for the addition of the northwest wing (one floor) to an existing building.

Phase I and II, according to the Aeronautical Systems Division civil engineering official, would provide space to enable the FTD to consolidate its functions into a single complex. At the present time, the FTD functions and personnel are dispersed in 11 buildings, seven of which are considered by the FTD to be inadequate.

B. Background

At the request of the committee, the investigative staff, during the period February 14 through February 24, 1972, conducted an inquiry into the phase I request for the appropriation of $4.7 million to construct an addition (77,280 square feet) to an existing facility at W–PAFB for the FTD of the Air Force Systems Command (AFSC). The results of the inquiry were incorporated in a report captioned "Technical Intelligence Operations Facility" which was furnished to the committee on March 15, 1972.

The investigative staff reported that a comprehensive AFSC-directed study had been conducted during February 1971 to determine the feasibility and cost effectiveness of relocating the FTD to Patrick Air Force Base in Florida. The AFSC study, considering all aspects, concluded that a relocation was feasible as well as cost effective, and would not only improve the FTD performance but also make more productive use of Patrick's underutilized facilities.

During May 1971, the AFSC study was evaluated by Headquarters, Air Force, and a decision was made to retain FTD at W–PAFB. FTD was informed that the AFSC study served to highlight the existing facility deficiencies of FTD. In this regard, Headquarters, Air Force, agreed to support FTD in renewed efforts to alleviate their deficiencies at W–PAFB. FTD was encouraged to submit an item for the fiscal year 1973 military construction program.

The decision to retain FTD at W–PAFB was based on an economic evaluation which concluded that a move to Patrick would be more costly than the construction of comparable facilities at W–PAFB.

Headquarters, Air Force compared the economic aspects of providing the FTD new facilities at W–PAFB versus a move to Patrick. The determination was that it would cost $12.10 million to remain at W–PAFB versus $13.87 million to move to Patrick, as shown below:

	Cost (millions)
Remain at W–PAFB:	
Facility construction (300,000 ft²)	$9.50
Facility modifications	1.20
Existing facility improvements and repairs	1.40
Total	12.10
Move to Patrick:	
Facility modifications	0.62
Security alarms	1.36
Equipment move and installation	3.11
Interim contract support	1.05
Personnel relocations	7.73
Total	13.87

As it has since developed, the valid cost for the FTD to remain at W–PAFB is $16.29 million as shown below:

	Cost (millions)
Remain at W–PAFB:	
Facility construction phase 1 (77,280 ft²) (fiscal year 1973 military construction program)[1]	$3.54
Facility construction phase 2 (242,870 ft²) (fiscal year 1974 military construction program)[2]	11.00
Rehabilitation—Building 828 (fiscal year 1977 military construction program)[2]	1.05
Rehabilitation—Building 829 (fiscal year 1977 military construction program)[2]	.70
Total	16.29

[1] Although this project was approved and authorized by the Congress at $4,700,000, the current working estimate is $3,540,000.

[2] The investigative staff was advised that these projects will be requested in the fiscal year 1977 military construction program. Both projects represent needs independent of those identified in phase 1 and of the proposed phase 2 addition.

During early 1971, it appeared to be the trend at W–PAFB to overestimate project costs such as occurred in estimates for the construction of the computer sciences center, the Air Force Materials Laboratory and the Flight Dynamics Laboratory. It is, therefore, difficult to perceive how the Air Force underestimated the 300,000 ft² facility construction cost used in their economic comparison as a basis for disapproving the relocation of the FTD.

C. Present foreign technology division space utilization

FTD, during February 1972 was utilizing 356,600 ft² of space in nine buildings. The buildings were identified and described in the prior investigative staff report. FTD is still utilizing these facilities but has acquired some additional area in two other buildings. The additional area provides 7,000 ft² of storage space in one building and 12,800 ft² of primarily administrative space in an Aeronautical Systems Division headquarters building.

The FTD's two primary facilities, which are to be the nucleus of the technical intelligence operations facility complex, provide 139,263 ft² of space categorized as adequate. Upon completion of the phase 1 construction (an addition of 77,280 ft²), adequate space will increase to 216,543 ft². Based on the FTD computed requirement for 459,413 ft², the remaining deficiency would be 242,870 ft². The proposed fiscal year 1974 military construction program project is designed to eliminate this deficiency.

The FTD space requirement, stated to be 459,413 ft², has not changed since first computed about 1964. The requirement was initially developed as the result of a study, by contract, conducted for the purpose of determining the FTD projected needs during the 1965–70 timeframe. At the present time, FTD foresees the need to allocate 220,950 ft² as special purpose area (space for computers, other electronic equipment, et cetera, which require either raised flooring or other special features relating to air-filtering, air-conditioning, and electrical power) and 238,463 ft² as administrative space.

Status of the phase 1 fiscal year 1973 military construction program project

On March 30, 1973, a contract was awarded to the firm of Frank Messer & Sons of Cincinnati, Ohio, for the phase 1 construction of a 77,280 ft² northwest wing (one floor). According to an Aeronautical Systems Division official, construction was expected to begin the week of April 16, 1973. This official estimated a 15-month construction period. Hopefully, he said, the facility would be available for occupancy during July 1974.

An FTD official remarked that the July 1974 date was optimistic and suggested that a completion date of about October 1974 (an 18-month construction period) was more realistic. He believed completion in 15 months could be attained only under optimum construction conditions and barring any unforeseen scheduling and labor problems or weather delays. The 18-month construction period is consistent with that furnished the investigative staff by a U.S. Army Corps of Engineers official.

The completion date is significant since the phase 2 project proposes adding a second floor to the phase 1 project both of which will be under construction at the same time.

The situation is further complicated by the fact that Frank Messer & Sons is presently involved in the construction of the Air Force Materials Laboratory at W–PAFB. The investigative staff was advised that this project is only one-third finished with completion expected about May 1974. Although the contractor will be involved concurrently in two construction projects, it was stated that no conflict in scheduling is expected.

The current working estimate for phase 1 is $3,541,072. Based on the award of a $3,082,700 contract to Frank Messer & Sons, the estimate was derived as follows:

Contract	$3, 082, 700
Contingency (2 percent)	61, 654
Subtotal	3, 144, 354
Army Corps of Engineers (5 percent)	157, 218
Subtotal	3, 301, 572
Known changes	3, 500
Special vault door	25, 000
Central surveillance system	211, 000
Total	3, 541, 072

The total cost is $1,158.928 less than the original cost estimate of $4.7 million prepared by the Air Force and authorized by the Congress. An Air Force official remarked that Air Force cost estimates prepared for past authorized projects at W–PAFB such as those for the computer sciences center, the Air Force Materials Laboratory and Flight Dynamics Laboratory were also considerably higher than the ultimate total cost of each project.

Another Air Force official assured the investigative staff that the proposed phase 2 project cost estimate of $11 million is sound, based on their most recent bid experience for the construction of the phase 1 project.

According to an FTD official, plans have been formulated with regard to the transfer of functions to the phase 1 addition. Present arrangements provide for the relocation to it or other FTD facilities of 381 personnel from two buildings which will be demolished during fiscal year 1975. The space gained by the addition of phase 1 versus the space lost by vacating two substandard buildings is negligible.

D. Proposed foreign technology division phase 2 project

On April 12, 1973, the investigative staff was advised that phase 2 design funds had been made available on March 9, 1973. Negotiations for the design contract are expected to be resolved sometime during May 1973. The Aeronautical Systems Division is negotiating with the same architectural and engineering firm responsible for the design of phase 1.

The design period for phase 1 took 9 months and the same amount of time is estimated for completing the phase 2 design, notwithstanding the fact that the project is much larger. According to an Air Force official, the design period for a project of scope of phase 2 would ordinarily be 12 months.

If negotiations are completed and work on the design is started in May 1973, the preliminary design should be available during September 1973 with design completion projected to February 1974. Under this timetable, a contract for the construction of phase 2 could be awarded during April 1974. Allowing for a 22-month construction period, completion of phase 2 was predicted by March 1976. If the design requires 12 months rather than the estimated 9 months to complete, the award of a contract, presumably, would be delayed until the beginning of fiscal year 1975. This possibility, together with other uncertainties would seem to indicate that the request for funding of the proposed facility is premature.

Obviously, phase 1 and phase 2 construction would overlap by at least 3 months and possibly as long as 6 months depending upon the accuracy of the phase 1 construction period estimates. It appears that some complications may arise particularly since phase 2 requires the addition of a second floor to the phase 1 (first floor northwest wing) project which would still be under construction.

Aeronautical Systems Division officials recognized potential problems in scheduling construction and keeping the contractors separated; however, the general tendency was to minimize the significance of these problem areas. It was suggested that Frank Messer & Sons "might" be low bidder on the phase 1 contract. This firm will be engaged in the construction of phase 1 and should have almost completed construction of the Air Force Materials Laboratory when phase 2 bids are opened.

The proposed phase 2 project would be similar in construction to the phase 1 project. It would be of vault-type construction, that is, concrete frame and prestressed concrete exterior walls. The interior walls would be of concrete block. Special features would include electronic and physical security systems. Phase 2 would include a 1,120-ton air-conditioning system valued at $1,624,000, the cost of which is included in the $11 million request.

Construction cost estimates

Building construction: 242,870 ft²	$10,116,000
Supporting facilities:	
Electrical	29,000
Transformer	81,000
Water, sanitary, sewer, and heat	228,000
Storm drainage	29,000
Site improvement	95,000
Roads, parking, and walks	197,000
Special security systems	225,000
Subtotal, supporting facilities	884,000
Total	11,000,000

E. Personnel

During February 1972, at the time of the investigative staff's prior study, the FTD assigned personnel strength was 1,686. This included 90 personnel detailed throughout the United States and abroad. The FTD authorized strength was 1,804 personnel.

An FTD official, on April 11, 1973, advised that the current assigned personnel strength was down to 1,634. Again, this included those assigned to duties at places other than W–PAFB. The FTD authorized strength had been reduced to 1,754 personnel. It was claimed that the reductions were the result of an AFSC-directed cutback which became effective the fourth quarter of fiscal year 1972.

Of the 1,634 assigned personnel, 93 are located away from W–PAFB; 1,509 are housed in the FTD facilities at W–PAFB; and 32 are located in an Aeronautical Systems Division headquarters building. The latter 32 personnel, who provide staff support to the Aeronautical Systems Division, will not be consolidated into the proposed FTD complex. In addition to its own employees, 116 persons representing the custodial force, air police, contractors, communications, and weather units, et cetera, also occupy space in FTD facilities.

The investigative staff was advised that FTD personnel assigned at W–PAFB, as of each June 30th, 1969 through 1972, were as follows: 1969, 1,751; 1970, 1,649; 1971, 1,540; and 1972, 1,550.

According to an FTD official, major personnel reductions occurred in fiscal years 1970 and 1971 which represented the FTD's pro rata share of AFSC-wide cutbacks and were not the result of any decrease in the FTD workload.

Notwithstanding AFSC-wide personnel reductions during fiscal years 1970, 1971, and 1972, as well as the possibility of future reductions, FTD projects an authorized level of 1,754 personnel each year through fiscal year 1978.

F. Observations

When FTD was a candidate for relocation to Patrick in Florida, there was a minimum of concern by personnel involved over leaving the AFSC community at W–PAFB. There were few, if any, compelling interrelationships between FTD and other activities at W–PAFB to preclude an FTD relocation. An FTD official commented that neither the W–PAFB organizations nor other vital customers throughout the United States would, under modern communication networks, find FTD any less accessible at another location. Admittedly, the situation is unchanged: however, any past anxiety caused by not being able to acquire their total space requirement by relocation has waned due to the authorization of phase 1 and the anticipated authorization of phase 2.

With the completion of phase 1, FTD plans to evacuate two badly deteriorated buildings, described as being beyond economical repair and scheduled to be demolished in fiscal year 1975. FTD will continue to occupy five buildings described as inadequate due to crowded conditions and inefficient climatic control. Actually, upon completion of phase 2, these five structurally sound buildings will revert back to the base for retention and reassignment.

Part of the phase 2 project provides for the addition of a second story to a section of the phase 1 project now under construction. This would indicate poor planning on the part of the Air Force, particularly in view of the fact that they overestimated the cost of the phase 1 facility in the amount of approximately $1.1 million.

As mentioned previously, the scheduled completion of the phase 1 facility in May 1974 coupled with the expected initiation of phase 2 construction at the same site in April 1974 could cause a short period of chaos among the contractors involved. However, a more realistic appraisal of expected progress on phase 2 design and construction efforts would indicate that no serious overlap of the two projects would occur. In fact, the investigative staff believes that the predicted design and construction completion dates by the Air Force for phase 2 are rather ambitious and, if gaged on past experience, some slippage should be expected to occur. With this in mind, it may be appropriate to further review the phase 2 design and construction timetable to determine if the funds request for this proposed project should be delayed to a later fiscal year.

AIR FORCE COMMENTS ON TECHNICAL INTELLIGENCE FACILITY INVESTIGATION

In connection with the timetable for the construction of the "Technical Intelligence Facility" at Wright-Patterson AFB, there should be no delay in the planned phase 2 design and construction for the following reasons:

The most critical impact, however, will be the delay in the installation of special purpose mission equipment programed for fiscal year 1977 and beyond. Any delay in the fiscal year 1974 MCP facility will necessitate the acquisition and rehabilitation of some existing facility, probably building No. 280. This would be an extremely costly (estimate $1.5 to $2 million) interim, and unsatisfactory solution to the FTD space problem. It would not relieve the current overcrowding, correct operational difficulties, or reduce the high annual facility maintenance cost. Therefore, any delay of the fiscal year 1974 MCP will cost an additional estimated $1.75 to $2.25 million plus the cost of the maintenance required on the older FTD buildings.

Present design and construction schedules are considered very realistic. The construction time for phase 1 and the design time for phase 2 are matters of contractural commitment. Taking into account possible unforeseen occurrences, as in all contracts, these firms committed themselves to their respective completion time frames. As a result, we consider the design and construction completion dates to be valid, and fully expect the work to be done on schedule.

Therefore, in addition to the operational disruptions that would be caused by delaying the approval of phase 2 until the fiscal year 1975 MCP, a contract award delay of 10 months would be experienced with an accompanying cost growth factor. This could cost as much as $800,000 based on an annual growth factor of 10 percent.

In view of the above, we strongly recommend against any delay in the approval of this phase 2 construction.

CONSTRUCTION SCHEDULE FOR TECHNICAL INTELLIGENCE FACILITY

Mr. DAVIS. Apparently we are going to start the second floor of this technical intelligence operation facility, to which the Chairman referred, before the first floor is completed. Is that correct?

General REILLY. Yes, sir. The foreign technology intelligence operation facility is being built in two increments. The first increment approved last year went under contract in March of this year and will be completed by July of next year. We anticipate that the increment before the committee in the 1974 program will go under contract hopefully by next February, just a few months before that first phase is completed.

If I may show you a picture of the facility, I think there has possibly been some concern that there would be some conflict in the two projects proceeding at the same time. I think that I can show you what is planned. This is a picture shown in green and dark blue of the new facility. The dark blue portion up to the right is the fiscal year 1973 increment. This is under construction and will be completed a year

from this July. The second increment, which is the second-story addition to the work now underway, as well as the whole 2-story addition shown in green, going under contract next February. In terms of work scheduling, we would anticipate that by the time the 1974 project goes under contract, the structure would be completed for the initial increment and the contractor would be doing interior finishing work.

We would also have the 1974 work started with the new 2-story addition. By the time the work proceeds to that which you see, the other contractor would be gone. It is also possible that we would have the same contractor.

Mr. DAVIS. What happened here; did you greatly expand your requirements or your criteria after the 1973 funding was provided to you? Did you at all times contemplate it was going to be two separate bids?

General REILLY. In justifying the project last year we talked to a requirement of 320,000 square feet additional space over and above the existing adequate space you see shown in white. That is principally to replace substandard outmoded buildings, and we simply phased the construction over a 2-year period. The requirement has not changed.

Mr. DAVIS. This entire picture was before the committee last year?

General REILLY. Yes, sir.

Mr. DAVIS. Obviously you are going to have to put this out on competitive bidding. What kind of problems do you run into where you have one contractor on the job and possibly another one comes at the same general site for a period of 3 months? Does that create problems?

General REILLY. We don't see any problem here inasmuch as the first work will be so far advanced and because of the physical separation of the two areas. It is fairly common practice to have two buildings under construction adjacent to each other with different contractors working.

Mr. DAVIS. How do the overall cost estimates which you discussed with the committee last year compare with what we are talking about here this morning?

General REILLY. Sir, when we appeared before the committee last year, I think I quoted a figure of from $15 million to $17 million as the anticipated total cost of the project. Our estimate is down to about $15 million. The favorable bidding that we experienced on the fiscal year 1973 increment plus our best estimate for 1974 has reduced that.

Actually we are forecasting $14.7 million total now as compared to something between $15 million and $17 million last year.

Mr. DAVIS. Your funding for the current fiscal year was how much?

General REILLY. $4.7 million was approved by the committee last year.

Mr. DAVIS. You now anticipate that you will get the work done for how much?

General REILLY. Our best estimate now, based on low bid and with the necessary overhead and contingencies, is about $3.7 million. We saved considerably over the programed amount. That savings has been reflected in the cost estimate we now have before the committee. The construction costs at Wright-Patterson Air Force Base, just a few

years ago, one of the highest cost areas we were experiencing, has been very difficult to predict in the last year or so. There has been a reversal in that trend both in the large materials laboratory, which we put under contract not too long ago, and in the recent bidding on this project.

Mr. NICHOLAS. If we may go back to the question of the overlap of the construction schedules, according to the investigative staff report the overlap could be from 3 to 6 months based on the schedule for the design of the second phase of this facility.

There is the implication here that you would expect the contractors to get in each other's way. Furthermore the slippage of one project would throw off the schedule in the second increment and increase the second contractor's cost in a way he could not control?

Yet you are saying that you don't anticipate any problem?

General REILLY. Mr. Nicholas, we don't see any problem at the present time. We have about 35 percent of the design completed on the new project. We have confidence in the schedule that we will have this design complete certainly by the first of the calendar year; assuming that we get our appropriations in the late fall.

I don't see why we cannot make it a February or early March award. As I stated earlier, by that time the present contractor should have the structure complete and simply be finishing with interior work. Again, we will start the new construction down in the area to the left so it would be a number of months before we would even be adding the second story to the fiscal year 1973 increment.

Mr. NICHOLAS. How can you be sure this won't pose any problem to the second man? Are you planning on the same contractor as on phase 1——

General REILLY. No, sir. Many times a contractor mobilized onsite is in a position to offer a lower bid. In other instances a new contractor will come in and completely underbid.

Mr. NICHOLAS. You don't have problems with two contractors onsite at the same time?

General REILLY. No, sir, we don't see any major problem here at all.

Mr. NICHOLAS. Could you provide some examples where this situation has existed in recent years?

General REILLY. Yes, sir.

[The information follows:]

The major facilities which were programed, authorized and constructed in phases are the Air Force Academy, NORAD Underground Combat Operations Center and Peterson Field Utilities. These projects were all awarded with each increment being a separate award. The Air Force has encountered no unusual problems in these experiences with phased construction.

[Editor's note: There were major cost problems at both the Air Force Academy and the NORAD Command Center.]

COST TO MOVE TO PATRICK AIR FORCE BASE

Mr. DAVIS. Provide up-to-date figures on what it would have cost to move to Patrick Air Force Base and what it is costing to stay at Wright-Patterson Air Force Base.

[The information follows:]

The updated costs are as follows:

	Millions
To stay at Wright-Patterson Air Force Base:	
New facility phase I fiscal year 1973 MCP	$3.54
New facility phase II fiscal year 1974 MCP	11.00
Total	14.54
To move to Patrick Air Force Base:	
Facility modifications	.62
Security alarms	1.36
Equipment move/installation	3.11
Interim contractor support	1.05
Personnel relocations	7.73
Subtotal (cost last year's study)	13.87
Increase of 7 percent for inflation	.97
Relocate AFTAC and other activities	1.30
Total	16.14

The Wright-Patterson cost does not include $1.75 million for rehabilitation of buildings Nos. 828 and 829 mentioned in the survey and investigations staff report of May 1973, as this work is not proposed at this time. The Patrick cost of $13.87 million also mentioned in the staff report is from last year's study and has to be increased conservatively by about 7 percent for inflation. The Patrick cost must also be increased to reflect the current situation at the base. The Air Force Technical Applications Center (AFTAC) has moved into the only facility capable of accommodating a major portion of the FTD. Other facilities on base would have to be modified for AFTAC and other activities would have to be relocated on base to accommodate AFTAC at a cost of $1.3 million.

The Air Force confirms its original decision to remain at Wright-Patterson AFB. The move to Patrick is not justified because of the large unrecoverable cost expenditure at Patrick versus acquisition of a prime facility asset at Wright-Patterson and the personnel turbulence which would result from the move. This turbulence would include loss of skilled workers who would not move to Patrick and reduced productivity during recruitment and training of new empoyees.

TECHNICAL INTELLIGENCE SPACE REQUIRED

Mr. DAVIS. Provide a breakout of space in the total technical intelligence facility by type.

[The information follows:]

The functional breakout of space in the technical intelligence facility follows:

TECHNICAL INTELLIGENCE FACILITY SPACE REQUIREMENTS

Type function	Area (SF) Existing adequate		Fiscal year 1973		Fiscal year 1974		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Administrative	26,100	16,900	8,900	8,400	24,600	18,400	59,600	43,700
Technical	14,700	8,800	9,800	8,300	82,800	68,200	107,300	85,300
Administrative support	18,000	9,700	16,300	16,300	7,300	6,000	41,600	32,000
Special purpose	64,900	38,900	27,500	21,100	101,100	87,300	193,500	147,300
Service areas	15,500		14,800		27,100		57,400	
Total	139,200	74,300	77,300	54,100	242,900	179,900	459,400	308,300

Note: Net area is building space actually occupied by personnel or equipment. Gross area is halls, stairways, toilets utility rooms type space.

Mr. DAVIS. The requirement is given here as 459,513 square feet. When was that established?

Colonel SCHAFFHAUSER. The initial requirement was first established back in 1965. The first increment of the building that was proposed got up to Congress, in 1968, and was deferred. That was for a lesser increment than we are now proposing. I believe it had 229,000 square feet in it. The requirement has been verified and established and supported by DOD. DIA has supported us in this requirement through the years. The requirement is still a justifiable level.

Mr. DAVIS. 459,000 square feet?

Colonel SCHAFFHAUSER. Yes, sir.

Mr. DAVIS. When was that set?

Colonel SCHAFFHAUSER. The initial requirement was in the 1965 time period.

General REILLY. 459,000 established at that time?

Colonel SCHAFFHAUSER. Yes, sir.

General REILLY. It has remained there.

Mr. DAVIS. The question then comes up as to whether that is still a valid requirement, especially in the light of the fact that we are in a time of personnel reductions.

Colonel SCHAFFHAUSER. There is another study made in the 1970–71 time period when we were considering the move. This figure was again validated as the total requirement.

Mr. DAVIS. Most of our personnel reductions have taken place since that time, haven't they?

Colonel SCHAFFHAUSER. Sir, when the Air Force's financial plan was updated on January 26, 1970, FTD was authorized 1,726 personnel. They are still authorized approximately, as of May, 1,759 personnel. The tech facility is one of the most important within the Air Force intelligence community. While we have sustained substantial reductions throughout Intelligence, the S. & T. portion has been favorably considered because of its importance.

Mr. DAVIS. You gave us those latest personnel figures. How does that compare with the number of personnel we were talking about at the time this space requirement was set?

Colonel SCHAFFHAUSER. I don't have that figure offhand. In 1964, when I was first assigned there, they had a personnel strength of about 1,100. They continued to grow until this 1968 time period and then they have leveled off pretty much from 1969 on. They are projected to retain a level of about 1,725 out through the 1978 time period.

Mr. DAVIS. Provide for the record your anticipated personnel for the next 5 years.

[The information follows:]

SAT INTELLIGENCE PERSONNEL STRENGTHS

The anticipated Wright Patterson AFB, Foreign Technology Division personnel for the next 5 years—fiscal year 1974–79—is 1,781.

Mr. DAVIS. You say you will use five buildings for other base requirements. Provide details as to exactly what use will be made of these buildings.

[The information follows:]

USE OF EXISTING INTELLIGENCE BUILDINGS AT WRIGHT-PATTERSON

The following is a breakdown by building of the planned use for the space to be released by the FTD and returned to the host command:

	FTD scope	Total building scope	Planned use/remarks
Building No.:			
10280	50,861	*124,174	FTD space to revert to plant data processing.
10861	3,794	3,794	Supply and issue shop.
10867	24,773	24,773	Communications group for combined administrative and storage use.
30219	33,124	33,124	USAF medical center for medical food inspection and area dental lab.
30259	24,158	24,158	Air base group headquarters for base procurement office. This will result in disposal of building No. 120 (13,950 sq. ft.) currently occupied by Procurement.

*Other current users of this building are data processing and micro film, records depository, command equipment storage and warehouse.

AIRCRAFT ENGINE COMPONENT RESEARCH FACILITY

Mr. DAVIS. There is a request here for $1,887,000 for alteration to what you call an aircraft engine component research facility. Is that just a fancy name for a wind tunnel?

General REILLY. No, sir. May I call on Colonel Stanton to explain this.

Colonel STANTON. Although this facility is somewhat similar to an open-loop wind tunnel in its outward configuration and operation, it is basically a 30,000-horsepower test stand with associated air inlet and exhaust ducting elements. This stand drives a test compressor, and unlike a wind tunnel, the only source of airflow is generated by the compressor being tested. The 30,000-horsepower test stand is in existence at Wright-Patterson.

With regard to an actual wind tunnel configuration, if it is running at full capacity, it would not be suitable for compressor testing in the transient mode. The intertia of the air moving machinery precludes the development of transient conditions for testing.

Mr. NICHOLAS. Will this all be environmentally controlled? Will you have to supply the type of atmosphere in which you expect the compressor to be operating?

Colonel STANTON. This is a sea level test stand. Through mechanical throttling techniques, the airframe can be controlled to aerodynamically simulate altitude conditions and conditions of maneuverability which the compressor would experience if installed in an aircraft in flight.

Mr. NICHOLAS. Will the temperature be controlled?

Colonel STANTON. When you map a compressor, the compressor performance map is produced with airflow corrected or normalized to sea level or normal atmospheric conditions including pressure and temperature. As far as the compressor is concerned, under these corrected conditions, it cannot aerodynamically discriminate between changes in environment due to altitude.

General REILLY. Our present testing facilities are only static. It is being able to provide this realistic environment which the engine actu-

ally experiences in flight that is so important. We have a picture to show of a turbine engine.

Mr. NICHOLAS. There is no requirement to provide a wind drive to this thing or exhaust dissipation?

Colonel STANTON. The total air movement is provided by the 30,000-horsepower test stand driving the test turbofan or compressor.

Mr. DAVIS. Do we have anything like this in existence at the present time?

Colonel STANTON. No, sir, there is no capability for this transient-type testing in the free world.

General REILLY. Referring to the picture of a turbine engine the compressor is on the front of the engine. The jet engine has four principal parts to it: The compressor at the front end; the combustion chamber, the turbine, and the exhaust nozzle at the rear end. There is a pressure differential created between the front and back of the engine which develops the thrust. The blades that you see in the front make up the compressor region. It is that component of the engine which we desire to research in this facility and to hopefully eliminate many of the problems associated with compressors that we now have in our engines. This continues to be one of the most troublesome areas in the jet engine; that is, compressor instability phenomena that occurs.

ROLE OF ENGINE MANUFACTURERS IN COMPRESSOR DEVELOPMENT

Mr. SIKES. This wouldn't be the responsibility of the manufacturer to seek a cure for these problems?

Colonel STANTON. The manufacturer effectively has a responsibility to deliver an end product with overall performance standards established by the Air Force specifications. This is a complex piece of machinery and any one of the integral portions of that complex piece of machinery can malfunction and effectively render the end article below specifications. We have frequently experienced compressor instabilities in the development of engines throughout the history of the Air Force.

We have some rather sordid history with regard to the technology associated with that. We do not really fully understand what basically goes on engineeringwise inside a compressor. To compensate we have built effectively a body of knowledge and experience and we use educated fixes, if you will, when we run into these kinds of phenomena.

Mr. SIKES. If the manufacturers were producing a product that did not measure up to standards and expectations, the public wouldn't buy it. Mr. Nader would have complained. Why are you buying this one?

Colonel STANTON. I would like not to reflect that industry delivers jet engines that are faulty to the Air Force. That is an improper connotation. What we are saying is that we have run into problems that require expensive fixes because we have not the technological base and design criteria with which to build a better compressor.

Mr. SIKES. Do no commercial aviation engines encounter the same problems that you are encountering?

Colonel STANTON. Yes, sir, they do, because both the military and commercial aircraft engines are developed by the same industrial corporations.

Mr. SIKES. What do they do about these shortcomings?

Colonel STANTON. Unlike the military aircraft, they are not subjected to rapid acceleration and deceleration under wartime combat conditions—afterburner lightoffs and these sort of things. They don't experience the harsh type of environment that the military aircraft do.

One comment I would like to make. As a result of not having a proper body of compressor technology knowledge, we effectively penalize overall performance of that engine. Currently, we map the compressor in a static condition to determine its surge or stall line. This facility will map the compressor in a dynamic condition. Due to the unknown difference between static and dynamic mapping, we can effectively move by the design and the surge point of that compressor so that we effectively have a margin of safety against stalling. It would be the same effect as running your automobile with excessive gasoline consumption and poor mileage. We are really penalizing the potential efficiency of that engine.

Mr. SIKES. You speak intelligently and effectively on the subject, but the thought still persists that the competition for the manufacture of these engines should have included the correction of such problems as this.

Colonel STANTON. I could provide historical examples of the kind of problems that we have and the kind of fixes that were not totally successful. The J–67 is a case in point and it provided power for the Century fleet.

Mr. SIKES. Are you saying that the correction of the problem is beyond the state of the art at this time and you are still having to grope for a cure?

Colonel STANTON. Yes, sir; that is exactly what I am stating. I am stating that this type of research capability in the United States would be a tremendous asset. It would provide a proper body of knowledge to eliminate technological risk and reduce expensive retrofit and correction problems for the Air Force in the future.

General REILLY. Mr. Chairman, I don't think industry has put or has wanted to put the large investment forward that it takes to analyze this phenomenon or this problem that has restricted the military use of the jet engine.

Mr. SIKES. The military use of the jet engine is a major use. It means a lot of work for manufacturers, and I confess that I am still puzzled by the fact that they seem to have done nothing to correct this type of problem.

Colonel STANTON. I would say "nothing" is an improper connotation. Industry, the engine manufacturers, have and use static compressor test facilities during the design and development of their engines. The problems that we find in engine operation are not in a static condition wherein the inlet temperatures, air flows and everything is stabilized. It is under such dynamic conditions as takeoff, rapid climb, deceleration, rocket firing, afterburner light-off that compressor problems occur. All these things induce transient phenomena inside that compressor which there is no ground capability to simulate at the present time.

LOCATION FOR COMPRESSOR TESTING

Mr. SIKES. Is this the only place where the kind of test that you propose will be done?

Colonel STANTON. Sir, we propose it should be done in a Government installation. As you have intimated the Air Force must be in a position to really understand, to guide the technology, and if, when engines are developed and run into trouble, to be able to come up with the necessary technological knowledge to direct fixes and to be able to evaluate a contractor's product prior to making a further development or procurement decision.

Mr. NICHOLAS. How closely is this related to the research function and how closely is it related to fixes at the time an engine is being tested? Are the types of skilled personnel, mathematicians, people familiar with the transient states of this thing, really located at Wright-Patterson or are they located at the places where you are testing these engines, where experts in testing engines are located?

Colonel STANTON. It is a function of the mission. The responsibility for the advancement, understanding, and direction of aerospace propulsion technology is the military mission of the Air Force Aerospace Propulsion Laboratory at Wright-Patterson. These people are the technical experts that monitor the industrial propulsion capability, direct that capability, determine the investigative studies and the technological advancements that must be made.

Mr. NICHOLAS. Where are the people who really know how to analyze the results from wind tunnels and who know what does happen in a test engine when it malfunctions?

Colonel STANTON. These people assigned to the laboratory have the responsibility of monitoring both on site and off site the kind of testing that we are talking about here. As such, they have the expertise required to both produce and analyze the data.

General REILLY. Those people are at Wright-Patterson in the Propulsion Laboratory.

Mr. NICHOLAS. Do they travel down to Tullahoma where engines are tested?

General REILLY. Tullahoma runs tests and the data comes back to the user.

Mr. SIKES. Why is it not all done in one place?

Colonel STANTON. Arnold Engineering and Development Center (AEDC) also has propulsion expertise and data analysis capability, but they do not have the mission responsibility of guiding the advancement of Air Force propulsion technology. They are a service agency. They provide and operate aerospace environmental facilities and provide data to the customer.

Mr. NICHOLAS. Where are the experts and people who know what happens when you put a certain engine in certain situations? Are the people who have the mathematical and analytical ability located at Tullahoma?

You said they provide the data but do they make a sophisticated analysis of the data instead of providing raw data?

Colonel STRANTON. AEDC does not normally provide a thorough and complete analysis of the data. AEDC produces raw data, reduces them and publishes a test report for the user. Those data are provided to the Propulsion Laboratory or other customers.

Mr. SIKES. Why don't you combine these operations at one facility? It seems there is inevitably duplication when you are doing the same kind of work, at least in part, at two different places.

Colonel STANTON. Sir, let me make clear that this test capability does not exist. We are not doing the same kind of work at two different places. Second, I would like to reiterate that the responsibility for advancing the propulsion technology is in the mission of the Aerospace Propulsion Laboratory at Wright-Patterson. Therefore, they will generate their own research data and utilize it to further the technology.

Mr. SIKES. Where does Tullahoma come into the operation?

Colonel STANTON. Tullahoma, in current Air Force planning, does not come into the operation.

Mr. NICHOLAS. Provide for the record a list of the people and their job descriptions who are employed in this lab. Also provide a list of the people in related areas in Tullahoma. Show, for instance, whether they are mathematicians or metallurgists, what their job may be, and their Federal job description category.

[The information follows:]

The Air Force Aeropropulsion Laboratory (AFAPL) at Wright-Patterson AFB is manned with 404 people, 355 civilians and 49 military. Of these 404 people, 225 are scientific and engineering personnel, 99 are technicians and 80 are administrative and clerical personnel. The assigned mission of the laboratory is to plan, formulate, present, and execute the USAF exploratory and advanced development programs in the areas of airbreathing propulsion, power generation, aircraft fuels and lubrication, and aircraft fire protection.

The turbine Engine Division of this laboratory directs programs of exploratory, advanced, and engine developments for prototype aircraft to advance the technical potential of turbo-propulsion systems. There are 85 people assigned to this division, 73 of which are scientists and engineers.

The components branch of this division conceives and conducts programs to enhance the technological capability of turbo-propulsion systems through analyses, design study, development, and test of major engine components, controls and diagnostics systems and check out techniques. There are presently 15 laboratory people directly involved with turbofan and compressor research and development. Eleven of these are aerospace engineers; three are electrical engineers; and one is a mechanical engineer.

It should be made clear that this group is supported technically by other organizations within the laboratory such as technicians and computer programers/operators. Very closely allied in presenting an integrated technical capability are personnel in the engine development branch, performance branch, and propulsion branch of this same division, as well as personnel in the Fuels and Lubrication Division.

The Commander of AEDC has an Air Force staff or approximately 250 military and civilian personnel who plan and schedule work, establish priorities, and supervise the accomplishment of the contractor (ARO, Inc.). The contractor is also responsible to the Air Force for the management, operation and maintenance of the entire station. ARO, Inc., has approximately 3,100 personnel employed to carry out this function. Of this total number approximately 750 are assigned to the engine test facility (ETF). The ETF's basic mission is to perform evaluation testing at simulated environmental conditions of all types of propulsion systems. This includes rocket as well as airbreathing engine testing. The breakdown of these ETF personnel is: 258 scientists and engineers; 376 technicians; 76 engineering aides; and 37 administrative. The scientists and engineers include: 93 mechanical, 51 aeronautical and 53 electrical engineers. The remaining 61 includes: Mathematicians, metallurgists, chemists, and so forth. These personnel prepare the test facility and test articles for testing, operate the 16 test cells, make measurements, reduce data and prepare the test reports.

Although there are numerous highly qualified engineering personnel specifically talented in the airbreathing engine testing area they are not specifically oriented toward the advancement or development of compressor technology for the Air Force.

[Additional information appears in the appendix to this volume.]

Mr. DAVIS. Tell us, also, for the record, how many personnel are involved in this research program at this time? How many will be involved when the new facility becomes operational?

[The information follows:]

There are currently 15 personnel involved. By the end of the fiscal year 1978 there will be a total of 50, 29 of which will be involved directly with CRF operation.

General REILLY. Mr. Chairman, I think a key point here is that, speaking of alternate locations, the facility does not exist at Arnold or anywhere else to do this work. They would have to be either modified or built from scratch.

Mr. NICHOLAS. You do have the necessary drive motors?

General REILLY. Yes; they are part of the Aerospace Propulsion Laboratory at Wright-Patterson Air Force Base. This deals with air-breathing engines as opposed to rocket engines.

Mr. NICHOLAS. Do you have the same number of these types of things, drive motors and building spaces, as you do at Arnold?

General REILLY. Yes. The Aerospace Propulsion Laboratory has a unique drive installation which was used for propellers. It is an adaptation of that system which permits this facility to be easily constructed at Wright-Patterson. This drive stand, together with millions of dollars invested in other facility resources, will be used. There is no drive mechanism at Arnold comparable to what we have at Wright-Patterson for this particular test function.

Mr. SIKES. General, let me say that I continue to be impressed by the expertise of the witnesses that the Air Force has brought for this hearing.

General REILLY. Thank you, Mr. Chairman.

Mr. SIKES. They don't always convince me, but I am impressed.

Mr. DAVIS. Is the Navy involved in something similar to this?

Colonel STANTON. The Navy at the present time does no compressor testing. They contract all work in this area.

General REILLY. They have a problem and they are extremely interested in what we propose.

Colonel STANTON. We share approximately three engine manufacturers in the United States, so we have common problems.

Mr. DAVIS. Are there any other questions on this particular facility at Wright-Patterson?

FOREIGN TECHNOLOGY INTELLIGENCE FACILITY

Mr. LONG. Not on this particular facility, but I have a question on the intelligence operation.

Mr. DAVIS. Go ahead if you want to ask about that.

Mr. LONG. What is this intelligence? What kind of intelligence is involved?

Colonel SCHAFFHAUSER. This is the aerospace scientific and technical intelligence activity for the total DOD. The FTD—Foreign Technology Division of Air Systems Command—supported by DOD in this area. This takes care of the total spectrum of aerospace, science, and technology from the basic technologies, foreign technology, from the basic electronics and metallurgy right on up to the most sophisticated.

Mr. LONG. This analyzes what other countries are doing?

Colonel SCHAFFHAUSER. Yes, sir.

Mr. LONG. In aviation technology?

Colonel SCHAFFHAUSER. Correct. Their mission is to see to it we don't get a technological surprise in the aerospace spectrum.

Mr. LONG. What about tactical operations; what the enemy is going to do in a particular tactical situation?

Colonel SCHAFFHAUSER. No, sir. Only so far as the capability of the weapons system. The design capability of the weapons system. The tactics to be employed do not fall within their area.

Mr. LONG. Is this to find out what the North Vietnamese are going to do if you send a flight over?

Colonel SCHAFFHAUSER. No, sir. They can tell you what equipment they have and what the capability of that is.

Mr. LONG. So it is purely technical?

Colonel SCHAFFUAUSET. Yes, sir.

Mr. LONG. What about intelligence so far as the activities of the people are concerned, such as the kind of thing going on at Holabird; do you have anything like that going on?

Colonel SCHAFFHAUSER. No, sir. They are primarily——

Mr. LONG. No, I want to know—not primarily. I understand what you are talking about, but do you have any intelligence work going on in which you are investigating, keeping track of people, bugging them?

Colonel SCHAFFHAUSER. No, sir.

Mr. LONG. You are not keeping any files on civilians or political people?

Colonel SCHAFFHAUSER. Americans?

Mr. LONG. That is right.

Colonel SCHAFFHAUSER. No, sir. None at all; we couldn't really give you a good run on the American system. They are concerned with foreign systems.

Mr. LONG. I understand what your primary interest is. I want to find out if there are any files kept on any people in this country about what their loyalties are.

Colonel SCHAFFHAUSER. None at all. They are not involved in that.

Mr. LONG. You have nothing to compare with what the Army was doing at Fort Holabird?

Colonel SCHAFFHAUSER. No, sir. They are aware of experts like they know that the leading authority in aerodynamics is maybe someone from——

Mr. LONG. I am talking about loyalty.

Colonel SCHAFFHAUSER. Nothing like that at all.

Mr. LONG. What are the increasing mission requirements which justify the addition?

Colonel SCHAFFHAUSER. Sir, in general the mission requirements have increased because of the sophistication of our collection systems. The increase in the bulk or magnitude of our tape.

TECHNICAL INTELLIGENCE SQUARE FOOTAGE PER MAN

Mr. LONG. I am a little puzzled as to the square footage here. You have 242,000 square feet here. That is about 6 acres in the intelligence center alone. When added to what you already have, what does that bring it up to?

Generally REILLY. 459,000 total requirement.

Mr. LONG. That is about 12 acres?

General REILLY. Yes, sir. Something over 10 acres.

Mr. LONG. The number of people involved in this thing is how many?

General REILLY. Something over 1,700 people.

Mr. LONG. Not 17,000?

General REILLY. 1,700.

Mr. LONG. Isn't that an enormous amount of square footage for 1,700 people?

General REILLY. Sir, we would have to give you some details on that. There is a great deal of equipment involved in this building as opposed to pure administrative space. That is people with desks. About 209,000 square feet, special purpose, which is principally equipment. 193,000 square feet and about 57,000 square feet of service area. I think it is the space required for special equipment and special purposes that accounts for the large gross.

Mr. LONG. That is 300 square feet per person. That is quite large. This is more than the square footage I have run into in any proposed military structure.

General REILLY. The bulk of those people would only be confined to a certain area of the building.

Colonel SCHAFFHAUSER. This is pretty close to half of it for special-purpose equipment; 193,000 square feet for special-purpose equipment.

Mr. LONG. Such as what?

Colonel SCHAFFHAUSER. There are computers and all of the electronic gear to reduce data, data reduction processing.

Mr. LONG. Most structures have rooms not for people but for equipment.

Colonel SCHAFFHAUSER. Not in that proportion. Not in nearly that proportion. They have a machine translations section for their open-source literature exploitation.

Mr. LONG. I understand that, but I am still asking why you need so much space per person. This is a fabulous space requirement per person.

Colonel SCHAFFHAUSER. You take away 200,000 square feet for the equipment, that leaves you about 208,000 or so.

Mr. LONG. That still leaves you 150 square feet per person. Isn't that quite a bit?

Colonel SCHAFFHAUSER. Yes, sir. But we have not taken out the special service activities, hallways, and all of this other space involved.

Mr. LONG. How does that compare with a moderate installation?

Colonel SCHAFFHAUSER. I will have to refer to somebody in the Civil Engineers.

General REILLY. We build about 150 square feet gross per person. Straight administrative space. That breaks down so that a worker should have about 80 to 90 square feet of net office area, exclusive of the equipment.

Mr. LONG. Assuming that half of it is for equipment, that works out about right.

General REILLY. That is right.

Mr. LONG. I think that covers it. Thank you.

Mr. DAVIS. In response to a staff question, you said an assessment of "all factors involved" leads you to the conclusion that Wright-Patterson Air Force Base is the optimum location for this facility. Provide the committee a copy of the study in which you considered all factors.

[The information follows:]

Numerous analyses by responsible staff and operating personnel validated the requirement of this facility to be sited as a research tool that enables the aeropropulsion laboratory to accomplish its mission of turbine engine R. & D. Extensive engineering and technical discussions, detailed coordination with AEDC, and the economics of location precluded the need for further indepth examination. Thus a formal study was not made. AEDC concurred in the location of the compressor research facility at Wright-Patterson by letter dated August 1971.

Mr. DAVIS. That brings us down to the Air Force lubricants laboratory.

The committee is adjourned until 2 o'clock.

[After a brief recess the committee reconvened at the call of the Chair.]

Mr. SIKES. The committee will come to order.

Mr. Davis.

SURVEYS AND INVESTIGATIONS STAFF REPORT ON FUELS AND LUBRICANTS LABORATORY

Mr. DAVIS. We had reached the aircraft fuels and lubricants laboratory, Mr. Chairman. The request for that is $4,857,000. We have had a staff report on this project as well. We will ask Mr. Nicholas to insert the pertinent portions of that staff report in the record.

[The information follows:]

III. FUELS AND LUBRICANTS LABORATORY (AIR FORCE AERO PROPULSION LABORATORY) WRIGHT-PATTERSON AIR FORCE BASE, OHIO

Introduction

The military construction program of the Air Force for fiscal year 1974 includes a request for the appropriation of $4,857,000 to construct a fuels and lubricants laboratory in area B at Wright-Patterson AFB. The requested project would house the fuels lubrication and fire protection division of the Air Force Aero Propulsion Laboratory (AFAPL). Most of the division's laboratory effort, which is currently dispersed in a number of buildings, would be consolidated into the proposed facility.

Background

The aeronautical systems division and seven Air Force laboratories, including the AFAPL, are concentrated in area B at Wright-Patterson AFB.

The AFAPL is responsible for the development, through exploratory and advanced development programs, of air breathing propulsion systems and aerospace power systems for current and future aircraft systems. The AFAPL is organized functionally into a turbine engine division; ramjet engine division; aerospace power division; fuels, lubrication, and fire protection division; and technical facilities division.

It is the responsibility of the fuels, lubrication, and fire protection division to develop aerospace fuels and lubricants with improved high temperature characteristics; develop test techniques for determining high temperature fuel and lubricant characteristics; develop advanced lubrication techniques; develop advanced bearing and gear concepts and to also develop a hazard protection capability for the effective prevention and control of fire and explosion associated with flight vehicle combustibles.

As far back as March 1967, the division has projected a total space requirement of 93,000 square feet which included 68,000 square feet of new construction

(a fiscal year 1969 military construction program request subsequently deleted by OSD), and the retention of 25,000 square feet of existing laboratory space. Currently, the total requirement is 96,920 square feet of space. The requirement was derived as follows:

Facility asset summary

	Square feet
Proposed facility	68,250
Existing facilities retained	28,670
Total space required	96,920
Presently occupied facilities	74,638
Net change[1] (plus)	22,282

[1] The net change is discussed further under section F.

Quantitative data appearing on the DD form 1391 regarding the proposed project sets forth, incorrectly, the total requirement as 68,250 square feet and the existing substandard space as 74,638 square feet. It should be as follows:

	Square feet
Total requirement	96,920
Existing substandard	45,968
Existing adequate	28,670
Deficiency	68,250

During 1967, preparatory to the submission of a fiscal year 1969 military construction program request for a fuels and lubricants research facility, the practicability of relocating this activity to a site other than W–PAFB was considered and rejected. An internal staff study performed by the Technical Facilities Division of AFAPL concluded that relocation to another site was impractical due to the excessive cost of relocation; loss of technical capability, research time, and management competence as a result of expected personnel losses; and nullification not only of technical interface with other activities but effectiveness of a centralized management environment which exists at W–PAFB.

The following tabulation comparing cost of a relocation was set forth in the staff study:

W–PAFB location

Facility construction (68,000 square feet)[2]	$2,969,000
Essential associated facilities:	
(1) Retained space (25,000 square feet)[2]	(1)
(2) Six static test stands	(1)
(3) Fuel tank farms (89,000 gal.)	(1)
(4) Environmental aging facility	(1)
(5) Engine assembly and inspection shop	(1)
(6) Low temperature facility	(1)
(7) Installed utilities and services	(1)
Total	2,969,000

Other location

Facility construction (93,000 square feet)[2]	3,870,000
Essential associated facilities:	
(1) Three static test stands and fuel tank farm (350,000 gal.)	6,100,000
(2) Environmental aging facility	160,000
(3) Engine assembly and inspection shop	250,000
(4) Low temperature facility	900,000
Total[2]	11,290,000

[1] Available.
[2] It was noted that this figure does not include utilities and services, personnel movements, and equipment relocation costs.

The study did not specify the other location. In the opinion of the investigative staff, if the Arnold Engineering Development Center site in Tennessee had been considered, relocation costs would have been considerably less due to the availability there of some essential associated facilities, particularly the costly engine test stands.

C. Present fuels, lubrication, and fire protection division facilities

The buildings now utilized by the Division provide 74,638 gross square feet space of which 14,648 square feet are accounted for by walls, corridors, restrooms, mechanical equipment rooms, and so forth. The remaining area is composed of 52,256 square feet of laboratory and support space with only 7,734 square feet devoted to administrative space.

Condition codes are assigned to the buildings occupied. The assignment of the codes is based on inspection and structural investigations by a W–PAFB civil engineer. The codes are as follows: Condition code 1—Usable, generally meets criteria; Condition code 2—Usable, upgrading required and practical; and Condition code 3—Cannot practically be raised to usable standards.

BUILDING 18 (CONDITION CODE 2)

The original building was constructed in 1928 with sections added in 1944. The Division occupies only parts of this building. A fuel lubricity laboratory, fire detection laboratory, and Division offices utilize an area of 6,805 gross square feet, which provides 4,045 net square feet of laboratory and support space and 2,100 net square feet of administrative space, respectively.

BUILDING 42 (CONDITION CODE 2)

This building was constructed in 1943. Two entire sections and part of a third section provide an area totaling 11,341 gross square feet of which 7,568 net square feet are devoted to laboratory and support space and 799 net square feet to administrative space. These sectional facilities house an aircraft fuel system simulator, a fuel filtration laboratory, and an endothermic fuel catalyst laboratory.

BUILDING 48 (CONDITION CODE 2)

This building was constructed in 1942. It provides an area of 2,368 gross square feet of which 1,934 net square feet are devoted to laboratory and support space and 192 net square feet for administrative space. The facility houses an inactive fuel tank slosh and vibration test rig.

BUILDING 59 (CONDITION CODE 2)

This building was constructed in 1943. Two sections provide an area of 14,000 gross square feet of which 11,845 net square feet are devoted to laboratory and support space and 785 net square feet to administrative space. The sections house lubricant test rigs and a fuel thermal stability laboratory.

BUILDING 62 (CONDITION CODE 1)

This building was constructed in 1942. It provides an area of 3,465 gross square feet of which 2,587 net square feet are devoted to laboratory and support space and 248 net square feet to administrative space. This building serves as a lubricant analysis laboratory.

BUILDING 70 (CONDITION CODE 2)

This building was constructed in 1942. The Division occupies an area of 12,289 gross square feet of which 6,452 net square feet are devoted to laboratory and support space and 3,610 net square feet to administrative space. The facility is utilized as a fuels analysis and rheology laboratory and contains scientific and engineering offices for the fuels and lubricants branches.

BUILDING 71–B (CONDITION CODE 2)

The original building was constructed in 1942 for engine test stands. The Division utilizes an area of 22,745 gross square feet of which 16,310 net square feet is devoted to laboratory and support space in connection with hazardous tests for the fire protection branch. The remainder of space is a gunfire test setup area.

BUILDING 71–D (CONDITION CODE 2)

This building was constructed in 1944. It provides an area of 290 gross square feet and is used as a fuel hotroom to check the aging effects on fuel.

BUILDING 352 (CONDITION CODE 2)

This building was constructed in 1959. It provides an area of 1,335 gross square feet and is used for fuel cold storage.

In the event the requested project is approved and authorized. the Fuels, Lubrication, and Fire Protection Division proposes as follows: (1) Retain only 600 square feet in building 1 for Division offices; (2) retain 12,000 square feet in building 59 for bearing test rigs; (3) retain 14,445 square feet in building 71–B for hazardous tests; (4) retain the 290 square feet in building 71–D as a fuel hotroom; and (5) retain the 1,335 square feet in building 352 as fuel cold storage.

The total area planned for retention would be 28,670 square feet; the balance of 45,968 square feet would be released for reassignment. It is proposed that equipment in the released facilities be relocated in the requested laboratory. One exception would be the reassignment to the Aeronautical Systems Division of the fuel tank slosh and vibration test equipment for which no relocation provisions have been made.

A Division official advised that the proposed facility would house existing equipment worth $2,111,000 (valued at replacement cost rather than development cost where applicable) and proposed equipment acquisitions costing $380,000. Some of the existing equipment not being used is either in storage at W–PAFB or at contractors' plants. The following is a summary of the equipment which would be housed in the proposed facility:

EQUIPMENT FOR PROPOSED FACILITY

Type of equipment	Existing equipment	Proposed equipment
Fuel analysis equipment	$103,000	$93,500
Fuel test devices	464,000	9,000
Fuel combustion test equipment	167,000	20,500
Lubricant analysis equipment	199,000	
Lubrication test rigs	470,000	7,000
Fire protection test equipment	639,000	250,000
Miscellaneous support equipment	69,000	
Total	2,111,000	380,000

D. Personnel

The division's assigned strength as of April 1973 was 81 (40 scientific and engineering, 7 clerical, 1 support, and 33 wage board technical) personnel. The division is authorized a total of 83 personnel (2 additional scientists and engineers). Although prior personnel figures were not immediately available, the investigative staff was advised that they were relatively constant from 1968 through 1972. In 1972 about nine scientists and engineers were hired to assume support functions when three support contracts were not renewed.

According to division officials, construction of the proposed facility is not expected to significantly affect future manpower needs.

E. Workload

The investigative staff reviewed an AFAPL long-range plan dated June 30, 1972, which identified and described the technical efforts projected for fiscal year 1973 through fiscal year 1980. The technical efforts were categorized into 19 technology planning objectives (TPO's). Each TPO represents an area of technology anticipated to be pursued to achieve technical goals responsive to the future estimated needs of the Air Force.

A fuels, lubrication, and fire protection division official stated that in developing the TPO's, the AFAPL personnel must estimate future technical gaps, capabilities of aerospace systems, and national objectives. This official also described the procedures followed in developing a work plan for a given fiscal year.

He stated, after the start of a fiscal year, a "call" is sent to the scientists and engineers of the laboratory for suggested work tasks to be pursued in the following fiscal year. All suggested work tasks include a cost estimate and breakdown of what is expected to be in-house and contract effort for the fiscal year under consideration, 3 subsequent fiscal years, and for the task through completion.

Suggested tasks are reviewed first at the branch and then at the division levels where some suggestions are dropped. After review and screening by the division chief, the remaining suggestions are forwarded to the AFAPL for review by a planning committee composed of branch chiefs. All suggestions are reviewed in light of the TPO's and a list of suggested tasks in order of priority is developed by the planning committee.

Based on the estimated availability of funds, the tasks falling above a funding cutoff point form the laboratory work plan for the fiscal year under consideration. There frequently is some shifting of priorities near the cutoff point. This work plan is submitted for review by higher Air Force authority. Any reduction in the funds estimated to be available would naturally result in the deletion of lower priority tasks. The investigative staff was assured that there are always more tasks on the priority list than can be accomplished with the funds provided to the division.

Funding for the division has been as follows:

FISCAL YEARS

[In millions of dollars]

	Actual		Projected				
	1972	1973	1974	1975	1976	1977	1978
Inhouse and contract (excludes manpower)	3.09	2.16	2.29	2.30	2.65	3.00	3.00
Laboratory support (includes manpower)	2.21	2.22	2.33	2.45	2.58	2.71	2.84
Total	5.30	4.38	4.62	4.75	5.23	5.71	5.84

The bulk of laboratory support funds are accounted for by manpower costs and include the costs for contract monitoring.

During fiscal year 1972, contract-oriented expenditures were 58 percent versus in-house expenditures of 42 percent. For fiscal year 1973, the trend has reversed with in-house expenditures at 54 percent versus 46 percent for contract expenditures. The breakdown for fiscal years 1972 and 1973 is as follows:

FUNDING

[In millions of dollars]

	Fiscal year 1972		Fiscal year 1973	
	Amount	Percent	Amount	Percent
Contract oriented expenditures (includes laboratory support and manpower)	3.073	58	1.998	46
Inhouse oriented expenditures (includes laboratory support and manpower)	2.225	42	2.380	54
Total	5.298		4.378	

The decrease in contract-oriented expenditures from fiscal year 1972 to fiscal year 1973 was due primarily to the lapse of three support contracts. Increased in-house expenditures for fiscal year 1973 are mainly accounted for by the hiring of nine scientists and engineers who assumed the support functions when the contracts were not renewed. A division official remarked that it is generally less costly to do a job in-house than by contract. It is anticipated that a still higher percentage of work will be accomplished in-house if the requested project is approved.

In regard to the proportion of in-house effort versus contract effort, the investigative staff was advised that the AFAPL had adopted a policy that total in-house effort would not be above 35 percent of the total effort. Because of the nature of the work of the fuels, lubrication, and fire protection division, the percentage of in-house effort is higher. Division officials stated this is essential in order to maintain the expertise necessary to monitor contracts. As of March 29, 1973, the division had 35 active contracts.

F. Proposed fuels, lubrication, and fire protection division facility

The requested project would be located on a site currently occupied by three buildings which are classified Condition Code 3 and proposed for demolition. Another building was previously located on the site but has already been demolished.

The facility would be a two-story structure with masonry walls, steel frames, concrete floor slabs, and concrete footings. Barricaded cells within the building would have reinforced concrete walls and ceilings. The building would be composed of laboratories; test cells; shops; scientific, engineering, and administrative areas; and underground fuel storage tanks. Other special features of the facility include fuel combustion research test cells, shock-vibration insulated test cells, a hazards detection test laboratory, "hi-mach" fuels research laboratory, hazardous vapor detectors, a special fire suppression system, and 30-foot high-bay test cells for hazards testing.

The facility would include a 230-ton air-conditioning system to provide adequate year-round environmental control. The investigative staff was advised that the cost of the air-conditioning ($330,000) is included in the project request estimate.

The construction cost estimates are as follows:

Construction cost estimates

Building construction: 2-story facility	$3,931,000
Supporting facilities:	
Electric	73,000
Transformers	204,000
Water, sanitary sewer	81,000
Steam lines	12,000
Demolition	115,000
Site improvement	134,000
Roads, parking, walks	106,000
Fuel storage tanks	201,000
Total	926,000
Total estimated cost	4,857,000

The gross area of the facility would be 68.250 square feet consisting of 36,606 square feet of laboratory space, 4,200 square feet of office space and 27,354 square feet of other space including laboratory support areas, mechanical equipment rooms, corridors, restrooms, storage areas, etc.

The space in the facility (68,250 square feet) and the existing space planned to be retained (28,670 square feet) would increase the division's area by 22,282 square feet over the currently occupied space (74,638 square feet). This increase results from 20,286 square feet of added laboratory space, 4,055 square feet of other space and a decrease of 2,059 square feet of office space.

The investigative staff determined that the major items accounting for the increase in laboratory space were as follows:

Activity	New capability	Increase existing capability	Square feet
Combustion test facility [1]	X		2,340
Simulated aircraft fuel environment	X		1,350
Hazards test cells [2]		X	2,750
Fuels analysis laboratories		X	2,300
Fuel heat transfer [3]	X		900
Slurry pumping	X		900
Lubrication test cells		X	7,000
Lubrication analysis		X	2,400
Total			19,940

[1] This is a new capability for the division. Although the AFAPL has a similar type facility, it is only partially adequate as to the needs of the Division.

[2] This is a new capability since the cells will be barricaded. The division has tested in nonbarricaded space.

[3] This is a new capability for the division. A fuel system simulation test rig which was developed, constructed and operated by the Shell Development Co., under contract until August 1972, has been in storage at W–PAFB and would be installed in the proposed facility.

The increase in laboratory space does not include an area of 2,368 SF in the facility which houses a fuel tank slosh and vibration test rig which is not being used by the division.

Division personnel to be housed in the proposed facility are 40 scientific and engineering people, 6 clerical people, one general schedule technician, and 26 wage board technicians.

The division chief, his assistant, and one clerical person would remain in office space located in building 18. Two wage board technicians would be assigned to the bearing test rig functions in building 59, and one wage board technician would be assigned to the hazardous test area in building 71B.

STATUS OF DESIGN

The design contract for the proposed facility was awarded during March 1973. As of April 10, 1973, an Air Force official estimated the design was about 10 percent complete. Design completion was estimated to occur during December 1973. The following schedule of events is anticipated if the project is approved: Advertise for bids, January 1974; bid opening, February 1974; contract award, March 1974; notice to proceed, April 1974; completion (18 months), September 1975; and beneficial occupancy, September 1975.

G. Air Force justification for the proposed facility

Several times over the past years, according to a division official, the question has been asked: "What do you have to do tomorrow that you cannot do without the new facility?" The answer is, "Nothing." The division has the reputation for getting things done and would continue to accomplish its mission using the existing facilities.

An Air Force official claimed that consolidation of the division's research functions currently being conducted in a fragmented manner in numerous, widely scattered facilities at W–PAFB is not the primary purpose for the proposed facility. However, inherent management problems and inefficiencies, which were claimed to presently exist, could be reduced upon consolidation into a single facility.

The primary justification for the requested project is that "most of the existing laboratory space is totally inadequate and cannot be economically modified to meet safety criteria. Garages[1] and maintenance shops have been adapted for test and laboratory areas. These areas do not have proper barricading, ventilation, or humidity and dust control for precise analyses required in defining specifications for procurement of fuels and lubricants."

At the time of the investigative staff's inquiry another Air Force official remarked that the Deputy Director (Test and Evaluation), Office of the Director Defense Research and Engineering, OSD, often examines the need for military construction program requests involving test and evaluation facilities. As a result of the proposed Air Force facility request, the services were instructed to conduct a study for the purpose of determining the feasibility of consolidating all fuels and lubricant activities. Service representatives involved in such activities who were assigned to the group designated "Subpanel on Aircraft Fuels and Lubricant Testing" ultimately issued a report during November 1972.

The resulting recommendations, serving to preserve the status quo, were as follows:

1. That the services continue the excellent coordination of their fuel and lubricant programs for the purpose of information exchange which, in turn, results in the avoidance of duplication.
2. That each service maintain its highly responsive, service domain-oriented fuel and lubricant personnel within its own equipment-oriented organization.
3. That consolidation of functions of facilities, in the aviation fuels and lubricants testing area, in a single service, not be considered further because the facilities are now at a minimum commensurate with the missions of the respective services.

The subpanel, as expected in conducting its review, found as follows:

The Navy and Air Force perform the preponderance of aviation fuel and lubricant testing. Based on dollar expenditures, approximately 55 percent, 42 percent, and 3 percent of this activity is performed by Air Force, Navy, and Army, respectively.

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[1] This is an apparent reference to building 62 housing the Lubricant Analysis Laboratory. The "garage" was remodeled at a cost of $34,000 and is classified as a usable facility (condition code 1) but claimed to be inadequate due to excessive dust.

The Navy and Air Force fuel and lubricant test facilities, though equipped with similar apparatus (and in some instances identical apparatus), are engaged in investigations of service peculiar products and problems and are supplementary and do not represent unjustifiable duplication.

Since the major role of the services is definition of their requirements (preparation of engineering data to be incorporated into specifications by which commodities are purchased), the removal of testing to another organization would not significantly reduce the need for personnel and equipment at each service to conduct its assigned mission.

Consolidation of that portion of the overall Department of Defense (DOD) activity devoted to testing of aviation fuels and lubricants in, or at, a single service would be impractical because: (1) no one service has sufficient resources to assume full responsibility for all DOD, and (2) the special expertise of each service is well confined to its assigned/assumed domain.

According to an OSD official the reported findings and recommendations of the subpanel are sound and would appear to justify the need for a new facility for future testing.

STUDY OF OTHER LOCATIONS FOR FUELS AND LUBRICANTS JOB

Mr. DAVIS. When was the last reevaluation made to determine if this laboratory should be located at Wright-Patterson or some other possible site?

General REILLY. Colonel Stanton. Please ask Colonel Stanton to come up to the table.

Colonel STANTON. There has been no recent study conducted, sir. In 1967 there was a general study conducted of potential relocation of the laboratory to other Systems Command locations. The study in a general sense considered current facility resources available to fuels and lubricants laboratory personnel, their mission, location, and orientation with respect to other elements within the command structure and the parent laboratory. The general conclusion arrived at was that it was inappropriate and uneconomical for the Air Force to consider moving the fuels and lubricants element of the laboratory.

Mr. DAVIS. According to the note that Mr. Nicholas has provided, that 1967 study referred to "other location," singular. Was there only one other site considered at that time, do you know?

Colonel STANTON. My recollection is it was not singular, but perhaps it was because it was a general study contrasting against basic resources currently available versus those within any other element of the command that could be made available.

If it were singular, a key candidate would have been Arnold Engineering Development Center.

Mr. DAVIS. This wouldn't fit in more appropriately down at Tullahoma, would it, than at Wright-Patterson?

Colonel STANTON. No, sir, because again this project, sir, is a portion of a major laboratory of Air Force Systems Command. It involves only some 79 of 410 people. We would suffer fragmentation of the experitise and disciplines of the total laboratory and the efficiencies of consultation of the Fuels and Lubrication Division with the rest of the laboratory.

A key element of overall propulsion technology development is the associated fuels and lubricants capability that must of course improve our turbine engine efficiency.

EXISTING FACILITIES

Mr. DAVIS. Apparently the situation here is that you have these existing facilities scattered in a number of different buildings and that you will be able to do the job in less total space if you do have it consolidated in one place. Is that right?

Colonel STANTON. Sir, that is not exactly true. The DD form 1391 data provides an apparent misconception. The laboratory personnel of the Fuels and Lubricants Division now occupy 74,634 square feet in 14 scattered, substandard buildings, most of them. They will retain for their mission use 28,670 square feet. Their final posture after construction of the proposed project, sir, will leave them at 96,900 square feet, which is indeed some 20,000 more than they are currently occupying.

Mr. DAVIS. Are you planning to dispose of about 50,000 square feet then?

Colonel STANTON. To make way for construction of the proposed project, there are four buildings that will be disposed of that contain 76,699 square feet. As a result of the construction of the project and reposturing of the laboratory there are another five or six buildings with an aggregate square footage of 48,196 that will be made available to the host command for further use and/or disposition at that time.

Mr. DAVIS. Are these buildings that are to be demolished simply in the way of the new building, or are they not usable? What is the score on that?

Colonel STANTON. It is a combination. True, they are in the way of the siting based on the base master plan for location of the new laboratory but three of these buildings date back to vintage 1928 and are used as minimal warehouses at the present time.

The fourth one is a 1952 building with 352 square feet. They do not contain laboratory space. They are effectively warehouses.

Mr. DAVIS. What happens to your ongoing research program if you are going to tear down part of the facilities you now have in order to put the new one up?

Colonel STANTON. Sir, we have no intention of relinquishing or tearing down or disposing of any space until this laboratory is a reality. Prior to its construction the laboratory will function in existing facilities, one of the compelling reasons for not tearing these buildings down and relocating the laboratory on site.

Mr. DAVIS. In other words, you are not tearing down any of the old buildings at the exact spot where the new building is going to be?

Colonel STANTON. No, sir. The two locations are remote from each other, sir.

COST OF LOCATION AT AEDC

Mr. DAVIS. According to the surveys and investigations staff report dated this month they reviewed the possibilities of a different site. It makes reference to the 1969 military construction program which apparently was never implemented and discusses the practicability of relocating this activity to a site other than the one proposed. They conclude that there could be substantial savings by doing it in that manner.

The lesser cost was for putting it at the Arnold Engineering Development Center site, is that correct?

Colonel STANTON. Sir, I will have to provide that for the record.

[The information follows:]

Prior to submission of the Fuels and Lubricants Laboratory project in the fiscal year 1969 military construction program, the Technical Facilities Division of the Air Force Aeropropulsion Laboratory (AFAPL) conducted an internal staff study. This study considered the feasibility of relocating this portion of the laboratory to any site other than Wright-Patterson AFB.

The study concluded that it was not in the best interests of the Air Force to relocate to any other geographical site for the following reasons: (1) the excessive cost of relocation, (2) the loss in technical capability, research time, and management competence as a result of expected personnel losses, and (3) the nullification of not only the present technical interface with other Wright-Patterson activities engaged in aeronautical systems development, but the effectiveness of the centralized management of aeropropulsion technologies within AFAPL.

The study identified the cost to relocate the facility to any other location as $11,290,000. This cost did not include utilities and services, personel movement, and equipment relocation costs. At the time the study was conducted the study included any potential site (including AEDC) as a proposed location. Significant resources existing at AFAPL that would have to be built at another location were three static (sea-level) engine test stands and associated fuel tank farm worth $6,100,000. Such test stands do not exist at AEDC. It is true that engines can be tested at sea level in the existing altitude engine test cells at AEDC and use the existing fuel farm, but it is an expensive mode of operation and a gross misuse of the altitude test capability which is very limited in this country. Secondly, fuels and lubricants testing with actual engines involves prolonged engine test runs. Therefore, it would not be in the best interest of the Air Force, in satisfying all engine test requirements, to tie up three of their altitude cells for prolonged periods for fuels and lubricants testing.

Colonel STANTON. I am not familiar with any cost associated with that location, sir. I would like to point out that even if it were to be located at Arnold there are penalties that the Air Force would have to pay for that relocation in terms of mission interface with elements of ASD where the procurement of all the aircraft are and with the remainder of the laboratory which would still be postured at Wright-Patterson. We would fragment the expertise of our total laboratory workforce and we would not enhance communications.

Mr. DAVIS. This facility is to be for the benefit of the Air Force. Will there be some benefits to the other sister services?

Colonel STANTON. In the world of fuels and lubricants research and development responsibility for each of the myriad of military and Federal specifications for fuels and lubricants is individually assigned to each of the respective services.

Wherein we have common product utility certainly the expertise that will increase, if you will, the value of specifications or improve the quality of our propellants and lubricants will be as beneficial to the sister services as they will to the Air Force itself, where there is common usage.

Mr. DAVIS. This particular type of testing is not conducted by the Navy?

Colonel STANTON. Yes, sir, it is.

Mr. DAVIS. Where do they do that; do you know?

Colonel STANTON. Yes, sir; the Navy has facilities that are comparable in extent at four different locations. They are located at the Naval Air Propulsion Test Center at Trenton, the Naval Air Propulsion Center at Philadelphia, the Navy Research Lab in Washington, and the Naval Air Development Center in Johnstown.

In other words, the total R. & D. capability in fuels and lubricants for the Navy collectively is at four separate locations.

Mr. DAVIS. I suppose the logical question is then do we need a very substantial facility such as this kind for a separate operation by the Air Force?

Colonel STANTON. Yes, sir. This past fall there was a panel, chartered by the Tri-Service Joint Logistics Commanders which looked at consolidation of facilities for the testing of fuels and lubricants. It was the consensus of that study that the existing minimal capabilities of each of the services operate effectively in different environmental domains, the Army with the ground use of fuels and lubricants, the Navy with shipboard and air, and the Air Force strictly with air, and there is no R. & D. duplication between the Navy air specifications and areas of surveillance with that of the Air Force. The Panel's finding was that the minimal R. & D. testing capability of each of the services negated any consolidation in one service or more than one of fuels and lubricants testing responsibility for all the Department of Defense.

Mr. DAVIS. That Tri-Service study was completed when?

Colonel STANTON. Approximately the turn of the year, sir; I don't know the exact date.

Mr. DAVIS. Within the past few months?

Colonel STANTON. Yes, sir.

[The information follows:]

DATE OF TRI-SERVICE JOINT LOGISTICS STUDY FOR FUELS AND LUBES LAB

The Tri-Service study was completed in November 1972, and the findings and recommendations were accepted by the Tri-Service Joint Logistics Commanders on January 10, 1973.

HUMAN IMPACT LABORATORY ADDITION

Mr. DAVIS. We will take a look at this addition and alteration of the human impact laboratory facility. The request is for $390,000. Would you review these alterations for us, how the existing facilities would be changed and what is the purpose of the change?

Colonel STANTON. One of the missions of the aerospace medical research lab is to perform research on human tolerance to horizontal deceleration and impact. The product of this research is physiological data which result in design criteria to aerospace designers for the proper protection of our aircrews in escape and ejection and crash impact, such as from the B–1 capsule or the F–111 capsule in which for example the design criteria obtained will result in proper restraining and protective devices for the aircrew upon ground impact in a B–1 escape capsule. That is the purpose of the facility. At the present time we have a horizontal acceleration device mounted in building 824. Building 824 will be modified to have a similar device used for horizontal deceleration and impact studies.

To house the new device it requires an extension of the building and a 58-foot extension to the existing track upon which the device will operate. There will be support areas for preparation of the test specimens and so forth.

I might state that nowhere in the United States does a reproducible, large payload test capability exist for high tolerance human subject testing for impact and crash landing.

Mr. DAVIS. Not even at the naval facility up in Pennsylvania?

Colonel STANTON. No, sir.

Mr. DAVIS. What kind of testing are they doing up there; do you know?

Colonel STANTON. You are speaking of Warminster?

Mr. DAVIS. Yes.

Colonel STANTON. They have an acceleration track. Their primary interest is in hardware testing, primarily of ejection seats, chutes, and restraining harnesses on ejection. They do not have the reliability or repeatability to pick up the physiological data with the right type of safety for the subject under test and their payload is limited to somewhat less than one-fifth of that that is intended at the Wright-Patterson facility, and there I am talking about the payload is up to 5,000 pounds for the intended facility at Wright-Patterson.

Mr. DAVIS. What about out at Holloman? What about down at NASA? Do they have anything of this kind?

Colonel STANTON. At Holloman there are two tracks. One is the large test track which is strictly used for hardware testing. It is not man rated in spite of the fact that Dr. Stapp did ride that track. The second track is a mission element of this particular laboratory. It was known and is known as the Daisy track. It has been used for physiological testing of human subjects but again it is limited in payload and reliability. The track is outdoors.

There is little repeatability in terms of test data to be obtained.

It will be retained by the Air Force for low g level testing. There is an intent on the part of the Air Force at this time to lease this facility to the New Mexico State University for their management and operation with the Air Force's proviso that we have priority considerations on tests that we would pursue there.

Mr. DAVIS. What about NASA?

Colonel STANTON. NASA does very little human subject testing except in the drop mode. In fact they had come to this laboratory in their Apollo studies. Further, in the area of NASA the total MCP requirements as to capability are reviewed by a DOD–NASA team called an Aerospace Aeronautics Coordinating Board.

This body reviews all the military construction projects of the Air Force and NASA and vice versa and postures and comes up with the position statement that is signed off by the Director of Defense Research and Engineering and the Deputy Director of NASA.

PERSONNEL STRENGTHS BY ORGANIZATION

Mr. DAVIS. Provide for the record strengths for the past 5 years and for the next 3 years broken out by activity at Wright-Patterson.

[The information follows:]

The following are manpower strengths for Wright-Patterson AFB in the time frame requested. The figures beginning in FY 1974 are adjusted to reflect the current programed position. These adjustments incorporate recent standards applications, civilian employment reductions, and the effect of force action change decisions.

	FY 69				FY 70				FY 71				FY 72				FY 73			
	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG
TOTAL BASE POPULATION	4067	4606	19159	27832	4039	4666	17965	26670	4069	4581	17802	26452	4207	4414	17372	25993	4383	4458	16882	25723
AFLC AT WPAFB	826	1765	9865	12456	815	1520	8804	11139	838	1539	8722	11099	853	1583	8557	10993	872	1621	8015	10508
AFLC HQ	(371)	(147)	(2150)	(2668)	(364)	(175)	(2090)	(2629)	(371)	(150)	(2006)	(2527)	(331)	(119)	(2033)	(2483)	(335)	(107)	(1998)	(2440)
AFSC AT WPAFB	1519	899	8347	10765	1591	859	8177	10627	1741	883	8460	11084	1943	908	8225	11076	1951	821	8272	11044
ASD (AFSC)	(895)	(536)	(5120)	(6551)	(968)	(459)	(5039)	(6466)	(1007)	(469)	(4960)	(6436)	(1137)	(443)	(4537)	(6117)	(1130)	(379)	(4358)	(5867)
STUDENTS	853	1		854	749			749	749			749	728			728	742			742
TRANSIENTS SUPPORTED	200	170	105	475	177	170	120	467	100	75		175	100			100	208	75		283

	FY 74				FY 75				FY 76			
	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG	OFF	AMN	CIV	AGG
TOTAL BASE POPULATION	4387	4466	16385	25238	4363	4453	16417	25233	4335	4452	16321	25108
AFLC AT WPAFB	870	1517	7905	10292	870	1517	7927	10314	869	1517	7857	10243
AFLC HQ	(335)	(107)	(1997)	(2439)	(335)	(107)	(1997)	(2439)	(335)	(107)	(1997)	(2439)
AFSC AT WPAFB	1931	803	7866	10600	1925	803	7876	10604	1898	803	7850	10550
ASD (AFSC)	(1105)	(370)	(4037)	(5512)	(1103)	(370)	(4047)	(5520)	(1075)	(370)	(4021)	(5466)
STUDENTS	742			742	742			742	742			742
TRANSIENTS SUPPORTED	208	75		283	208	75		283	208	75		283

AIRMEN'S DORMITORY

Mr. DAVIS. Why does the cost of this airmen dormitory stand at $34.20 a square foot while other airmen dormitories cost under $30 a square foot?

[The information follows:]

SQUARE-FOOT COST OF AIRMEN DORMITORY AT WRIGHT-PATTERSON

The area cost factor, used for adjusting program cost estimates, for Wright-Patterson AFB is (1.20). We have used the new DOD statutory limit of $28.50 per square foot for airmen dormitories and adjusted this figure with the applicable area cost factor for the location of construction.

Mr. DAVIS. You say most of the assigned airmen will be housed in adequate dormitories if this project is approved. How many will not be adequately housed?

General REILLY. Completion of the proposed new construction project of 194 spaces will raise the adequate housing level to 72 percent of our requirements, leaving 28 percent inadequately housed.

ADVANCED LOGISTICS SYSTEM UTILITY SUPPORT

Mr. DAVIS. Then we have a request for $300,000 for advanced logistics system utility support. Have you had a problem out here or are you gearing up for some additional requirement?

General REILLY. Mr. Chairman, it is the latter. The new third-generation computer has just been installed at Wright-Patterson. It will start operation the 1st of this July. The backup power and electricity will be required to assure the effective operation of that equipment.

Mr. DAVIS. Is this computer installation similar to those at other AFLC bases?

General REILLY. All ALS installations will have essentially identical types of equipment installed; however, each will be unique in numbers and capacity of certain components. Major differences are:

(*a*) The amount of extended core storage.

(*b*) The total requirement for immediate access storage devices.

(*c*) The number of peripheral devices required in the machine room; tape drives, card readers, card punches, and line printers.

(*d*) Number of remote devices and associated communications equipment required.

The nuclear ordnance logistics system (NOLS) site at Kelly AFB is unique in that only one central processing unit (CPU) is required, compared with two CPU's initially installed at all of the other ALS sites.

Mr. SIKES. Thank you very much, Mr. Davis.

Colonel Stanton, what is your job?

Colonel STANTON. Sir, I am the R. & D. representative on General Reilly's facilities requirements committee and my purpose is to program, support, and defend R. & D. for the Air Force R. & D. community.

Mr. SIKES. What is your educational background?

Colonel STANTON. I have a bachelor of aeronautical engineering and master of science in industrial management, sir.

Mr. SIKES. You are a very capable witness.

Colonel STANTON. Thank you very much, sir.

AIR FORCE SYSTEMS COMMAND

Mr. SIKES. We will take up the Air Force Systems Command. Put in the record page 54.

[The page follows:]

Air Force Systems Command

Installation:	*Proposed program*
Edwards Air Force Base, Calif	$889,000
Eglin Air Force Base, Fla	7,039,000
Laurence G. Hanscom Field, Mass	480,000
Satellite control facilities	654,000
Total	9,062,000

AIR FORCE SYSTEMS COMMAND

The next major command to be considered is the Air Force Systems Command whose mission is to advance aerospace technology, adopt it into operational aerospace systems, and acquire qualitatively superior aerospace systems and materiel needed to accomplish the Air Force mission.

The construction program at bases with Air Force Systems Command as host amounts to $9,062,000. Of this amount, $8,207,000 is for items to support the Air Force Systems Command mission and $855,000 is in support of the Tactical Air Command on Eglin Auxiliary Airfield No. 9.

Similarly, presentations of the Air Force Logistics Command, Strategic Air Command and the Tactical Air Command include $22,646,000 for the Air Force Systems Command. The total construction program in the United States in support of the Air Force Systems Command is $30,853,000.

SUMMARY OF SURVEYS AND INVESTIGATIONS REPORT ON SYSTEMS COMMAND

Mr. SIKES. The request is for $9,062,000. We have a classified investigative staff report on the Systems Command which will be sanitized and placed in the record. It will be made available to the Air Force. Possibly we will place portions of it, a summary of it, in the record.

[The information follows:]

HOUSE APPROPRIATIONS COMMITTEE SURVEYS & INVESTIGATIONS STAFF REPORT
ON
AIR FORCE SYSTEMS COMMAND FACILITY UTILIZATION

I. INTRODUCTION:

The purpose of the study was to analyze the Air Force Systems Command (AFSC) projected workload, inventory existing facilities and analyze their current and projected rates of utilization and study plans for construction of new facilities.

II. SCOPE:

The investigating team visited all AFSC continental US bases as well as other bases hosting Systems Command field elements.

III. AFSC:

The AFSC is responsible for the advancement of aerospace technology and development and acquisition of the aerospace systems necessary for national survival. AFSC manages or controls approximately 30% of the yearly Air Force Budget, 57,000 Military and Civil Service personnel and world-wide facilities which cost $2 billion. In addition AFSC has cognizance over 37 Air Force plants (Industrial Facilities) representing an investment in excess of $2.2 billion.

AFSC Headquarters, a tenant at Andrews AFB employs 1,920 people and occupies about 430,000 SF of building space which cost approximately $8 million.

It was observed that AFSC field elements response to AFSC Hq planning guidance varied markedly and the field projected resource requirements may therefore be unrealistic.

IV. ARNOLD AIR FORCE STATION, TULLAHOMA, TENNESSEE.

Arnold Air Force Station (Arnold AFS), a 41,000 acre installation established by the Unitary Wind Tunnel Act, PL 415 of the 81st Congress, is managed by the Arnold Engineering Center (AEDC). This installation, a national resource, is used to satisfy aerodynamic, space environment and propulsion test requirements of the Air Force and other services as well as other Government agencies, industry and allied foreign Governments.

There are 240 buildings having 1,901,624 SF to accommodate three major test complexes and the AEDC Hq. The Engine Test Facility occupies 41 buildings (421,028 SF); the Propulsion Wind Tunnel facility, 27 buildings (195,048 SF); the Von Karman Facility, 21 buildings (309,713 SF); and the remaining 151 buildings provide space for the headquarters functions and supporting shops, library, restaurant, post office, etc.

AEDC has an authorized strength of 226 to manage this installation having an acquisition cost, excluding land, of slightly less than $365,000,000 and an estimated replacement cost of over $815,000,000. The facilities are operated and maintained by a contract that averages $50 million/year. The workload has been increasing since FY 71 and AEDC officials believe the trend will continue.

AEDC has identified 39 projects estimated to cost $70,000,000 that are candidates in the FY 74-78 MCP. In addition, two high cost facilities, the Aeropropulsion Systems Test Facility ($200,000,000) and the High Reynolds Number Tunnel ($40,000,000) are also proposed at Arnold AFS. Appropriate committees of the Congress have been notified of these two proposed facilities.

V. AIR FORCE EASTERN TEST RANGE, FLORIDA.

The Eastern Test Range (ETR) is a DOD National Range over which the Air Force has been assigned executive management responsibility and the Headquarters is located at Patrick AFB, Florida. The ETR consists of Patrick AFB, Cape Kennedy Air Force Station, and a chain of 45 instrumented tracking stations in the lower Atlantic extending to Ascension Island and Pretoria, South Africa.

The ETR which supports all DOD and NASA missile and space launches has a combined government and contractor work force of 14,211 employees. Since 1966 this Range has endured a reduction in personnel of 48%. The FY 72 missile and space launch workload is expected to double in the FY 73 through FY 76 period, primarily due to an increased Navy requirement.

The investment cost of facilities at Patrick AFB, exclusive of land and equipment is $88,619,000 with an estimated replacement cost of $207,521,000. Seventy-nine thousand SF of unused space in the Technical Laboratory was at one time proposed to house the Foreign Technology Division from Wright-Patterson AFB, Ohio, and now houses instead the Air Force Technical Applications Center, previously in Alexandria, Virginia. ETR computer and photographic activities are also in this complex. In addition there are eight administrative facilities, which could be more intensively utilized.

Of the 45 established instrumented range sites with a total value of $58,300,000, 19 are active and operated on foreign soil by agreement, and 11 are active and operated in the State of Florida, and the balance are in caretaker status.

Cape Kennedy Air Force Station with an investment cost, exclusive of land and equipment, of $215,954,000 and an estimated replacement cost of $447,025,000, is devoted to preparation, checkout and launch of missiles and space vehicles. Fifteen formerly active complexes have either been demolished, converted to other use or placed in standby. Eleven launch complexes are currently active. There is administrative space in 16 buildings that is not being fully utilized.

Thirty-seven military construction projects, totalling $18,022,000, have been identified as FY 74-FY 78 requirements by ETR.

VI. ARMAMENT DEVELOPMENT AND TEST CENTER, EGLIN AFB, FLORIDA.

Eglin AFB, managed by the Armament Development and Test Center (ADTC), consists of over 740 square miles of land and an unrestricted test area extending over the Gulf of Mexico. It represents an investment cost of over $200,000,000, exclusive of land, and has an estimated replacement cost of $1.5 billion.

ADTC with an authorized manpower strength of about 7,900 supports over 30 tenant organizations (10,000 manpower level) as well as being responsible for research, development, test and evaluation and initial procurement of Air Force conventional munitions and related equipment.

The major elements of ADTC are the Headquarters staff, 677 personnel occupying 125,429 SF in two buildings; the Air Force Armament Laboratory having 791 personnel occupying 246,738 SF in 23 buildings; the 3246th Test Wing and the Directorate of Range Engineering with 1473 personnel occupying 573,767 SF in 57 buildings. The remaining ADTC personnel provide the base support (Personnel, Civil Engineering, Logistics, etc.) and occupy 2,765,464 SF in 402 buildings.

The tenant organizations occupy 1,054,069 SF in 247 buildings.

ADTC has identified 87 projects having a total estimated cost of $67,000,000 as candidates for the FY 74-78 MCP.

VIII. EDWARDS AIR FORCE BASE, CALIFORNIA.

A. Edwards Air Force Base (EAFB) managed by the Air Force Flight Test Center (AFFTC) consists of over 300,000 acres, represents an investment of about $200,000,000, exclusive of land, and has a replacement cost of $330,000,000.

AFFTC, authorized strength of 4987, is responsible for flight testing and evaluation of aircraft systems, training of test pilots, testing of aerodynamic decelerators and supporting over 42 tenant organizations including the NASA Flight Research Center. Major elements of the AFFTC are the 6510th Test Wing, 547 personnel occupying 22 buildings (1,508,672 SF); the Air Force Pilot School occupying one building having 25,610 SF; the 6511th Test Group (Parachute) at El Centro, California; and the support organizations (Supply, Civil Engineering, Personnel, etc.) occupying over 125 buildings having over 1,700,000 SF of space. Consideration is being given to moving the 6511th Test Group (Parachute) from El Centro to Edwards AFB.

AFFTC has identified 29 projects, estimated cost of $61,912,000, as candidates for the FY 74-78 MCP.

B. AIR FORCE ROCKET PROPULSION LABORATORY (AFRPL)

AFRPL, a tenant of EAFB, on a remote 70,000 acre site is responsible for developing rocket propulsion technology and evaluating/exploiting new rocket concepts. The AFRPL, whose authorized strength has been reduced from a peak of around 800 in the late 60's to about 500 has consolidated its functions and is presently utilizing a portion of the facilities provided in the mid and late 1960s. The AFRPL has 63 buildings containing 621,000 SF, approximately 80%

is used and the balance, general purpose is in stand-by status. AFRPL noted that due to the remote location and the type of facilities vacant it is unlikely they will be effectively utilized under present programs. AFRPL MCP requirements consist of two projects, totalling $2,000,000, to upgrade their two most active facilities and a $6,500,000 3-year incrementalized program to provide exhaust scrubbers on their most heavily utilized test stands.

VIII. KIRTLAND AIR FORCE BASE, NEW MEXICO.

The Air Force Special Weapons Center (AFSWC) conducts aircraft compatibility testing of special weapons and associated support equipment, tests and evaluates inertial aircraft navigation and missile guidance systems and operates the high speed test track and radar target scatter facility. It is the host organization at Kirtland AFB and has an operating organization, the 6585th Test Group, operating three major test facilities as tenants at Holloman AFB, New Mexico.

Kirtland AFB has 47,446 acres of land and over 760 buildings. The facilities, exclusive of land and equipment, represent an investment cost of $168,307,000 and an estimated replacement cost of $378,000,000. AFSWC has 3,985 personnel assigned and another 12,986 personnel belong to a number of tenant organizations, the largest of which are the Defense Nuclear Agency, the Atomic Energy Commission (AEC) and the Air Force Weapons Laboratory (AFWL). The Manzano Base facilities, consisting of 690,518 SF have been vacated due to remoteness and security. Based on Air Force acquisition of 249 excess buildings from the AEC in April 1971, Kirtland facilities were deemed underutilized. Air Force officials claimed attempted full utilization by numerous planned relocations; such as, Headquarters, Contract Management Division from Los Angeles AFS, California. The Investigative Staff further suggested that a consolidation of Headquarters, Human Resources Laboratory, Brooks AFB, Texas, with some of its operating elements at Kirtland might be appropriate.

The Air Force Weapons Laboratory (AFWL), is the principal Air Force tenant organization and executes research, exploratory and advanced development of nuclear and advanced weapons. AFWL workload, funding and manpower, with emphasis on laser development, is expected to increase over FY 72 levels.

Thirty-three military construction projects, totalling $15,903,000, have been identified as FY 74 - FY 78 requirements for both AFSWC and AFWL by Kirtland Air Force officials.

IX. LOS ANGELES AIR FORCE STATION, CALIFORNIA.

The Headquarters elements of both Space and Missile Systems Organization (SAMSO) and Air Force Satellite Control Facility are located at Los Angeles Air Force Station with the exception that the Minuteman missile management element of SAMSO is housed as a tenant on Norton AFB, California, 75 miles away. SAMSO has, including all world-wide operating elements, 5600 people, expends $2 billion annually and operates from an estimated property and equipment investment of $700,000,000. SAMSO has 1,499,000 SF of space worth an investment cost of $38,800,000. However, Annex I consisting of three government buildings on 3.89 acres of land and a leased building and a leased parking lot will be disposed of by July 1973 with savings of refurbishment, maintenance, and leasing costs.

The retention of Annex II which has a 65,106 SF government-owned aircraft hangar on land leased from the city of Los Angeles was questioned. Annex II houses the 6592d Operations Squadron and seven aircraft used for administrative and proficiency flying support of SAMSO. A logical alternative would be relocation to Edwards AFB, California, about 90 miles north of Los Angeles.

Six military construction projects, totalling $4,962,000, have been identified as FY 75 - FY 77 requirements by SAMSO.

X. SUNNYVALE AIR FORCE STATION, CALIFORNIA.

Although the headquarters is in Los Angeles, Detachment 1 of the Satellite Control Facility operates the Satellite Test Center (STC) at Sunnyvale which is the hub of a world-wide network of tracking stations which monitor status, communicate with and control satellite vehicles. The STC consists of three primary buildings on 19.6 acres of land. The acquisition cost of the complex is $18,400,000. This STC complex is occupied by 1,369 people which is expected to remain at that level. A new wideband satellite communication system will be acquired over the next three years which will require additional space. In

addition to the STC there are seven other world-wide satellite tracking stations. These stations retrieve and collect telemetry data, tracking data and payload information which is transmitted to the STC by an inter-station communications network.

Satellite Control Facility workload is expected to exceed the FY 72 level for the next three years.

Twenty-one military construction projects, totalling $19,439,000, have been identified as FY 74 - FY 78 requirements world-wide by Satellite Control Facility personnel.

XI. SPACE AND MISSILE TEST CENTER, CALIFORNIA.

The Space and Missile Test Center (SAMTEC) which is subordinate to SAMSO has a headquarters staff and operating elements which are tenants on Vandenberg AFB, a Strategic Air Command installation. SAMTEC's mission is to operate the Western Test Range in support of DOD and NASA missile and space programs. In this mission SAMTEC employs 5,758 people (880 Government personnel and 4,869 contractor personnel).

SAMTEC workload is projected to continue at the FY 72 level. Reductions in Air Force programs such as Minuteman will be offset by increases in NASA and Navy programs.

SAMTEC and its range contractors occupy 667,021 SF of space of 47 buildings with an acquisition cost of $19,679,000. Similarly, 17 missile and space contractor firms are utilizing 95 facilities on Vandenberg AFB with an acquisition cost of $34,728,000. The primary down-range instrumentation complex is located on Canton Island. It is a 1,700 acre foreign land agreement base having facilities valued at $2,623,000.

Twenty-two military construction projects, totalling $18,668,000 have been identified as FY 74 - FY 78 requirements by SAMTEC. Two projects for FY 77, the Communications Operation Center and an Operations Technical Facility, do not appear to be valid.

XII. ROME AIR DEVELOPMENT CENTER (RADC), GRIFFISS AIR FORCE BASE (GAFB), NEW YORK.

RADC, a tenant at GAFB, occupies on base facilities having an investment cost, exclusive of land, of about $22,000,000 with a replacement cost of almost $33,000,000. In addition, RADC has 16 off-base sites (ranging in size from two to 214 acres) totalling 2,717 acres. Six of the sites are leased.

RADC has an authorized strength of about 1460 and is responsible for RDT&E of ground based electronics. FY 72 funding to RADC from AFSC, other commands and other agencies for this work was almost $160,000,000.

Only one relatively small ($400,000) MCP facility is planned in the foreseeable future.

XIII. LAWRENCE G. HANSCOM FIELD, MASSACHUSETTS.

A. LAWRENCE G HANSCOM FIELD (LGHF), managed by the AFSC Electronic Systems Division (ESD) consists of 1,661 acres, 640 of which are leased. The capital investment is over $80,000,000.

ESD also plans, programs, designs and manages the acquisition of all electronic command, control and communications systems. Approximately 48 percent of the authorized 3900 personnel are utilized for operation, maintenance, and support of LGHF and off-base facilities of ESD and tenants (tenants authorized manpower is 4,800).

ESD was involved in 40 projects ($700,000,000) for more than 400 world-wide installations in FY 72. Three of the 13 world-wide ESD detachments supporting such efforts will be phased out in 1973.

ESD has identified 21 facilities totalling $10,500,000 as candidates for the FY 74-78 MCP. In addition a $13,500,000 FY 74 MCP project for facilities associated with an OSD approved radar system was recommended by USAF to OSD.

B. AIR FORCE CAMBRIDGE RESEARCH LABORATORY (AFCRL).

AFCRL is a tenant at LGHF responsible for research and development in the environmental and physical sciences. It occupies over 510,000 SF in 34 buildings as well as almost 55,000 SF on six off-base sites in Massachusetts. Three of these are leased.

Additionally, AFCRL has seven leased instrumentation sites (six in Massachusetts and one in Minnesota) totalling 250 acres. AFCRL also has a Solar

Research Laboratory at Cloudcroft, New Mexico and two Balloon Launching Detachments, one at Holloman AFB, New Mexico and the other in Chico, California.

AFCRL personnel strength has been decreasing (from 1241 in FY 1969 to 1156 in FY 1972). No reduction in their annual funding level ($55,000,000) is anticipated.

The only MCP project identified by the AFCRL is a $613,000 addition to their research library which was submitted in their FY 74 MCP.

XIV. WRIGHT-PATTERSON AIR FORCE BASE (WPAFB), OHIO.

Two AFSC Divisions and seven Laboratories, tenants of the Air Force Logistics Command at WPAFB, utilize approximately 5,300,000 million SF of space in 150 buildings. The actual cost of the AFSC occupied facilities, including improvements, but excluding mission equipment, was $96,750,000. Their replacement cost is estimated at over $300,000,000. AFSC, the largest tenant at WPAFB employs over 40% of the total base population.

A. AERONAUTICAL SYSTEMS DIVISION (ASD).

ASD is responsible for planning and managing the development and acquisition of aeronautical systems, subsystems and associated equipment as well as providing extensive support to the other AFSC elements at WPAFB. ASD personnel (5870) occupy about 56 buildings having slightly less than 2,250,000 SF of administrative, shop, supply, laboratory, hangar and other support type space. ASD funding for RDT&E and production has normally been about $3 1/2 billion annually and is projected at $4 billion for the next several years. ASD has identified five projects totalling $21,795,000 as candidates for the FY 74-78 MCP.

B. FOREIGN TECHNOLOGY DIVISION (FTD).

An investigative Staff Report on the FTD FY 73 MCP project (Phase I) was submitted on 15 Mar 72. Phase II, 242,000 SF with an estimated cost of $11,500,000, is planned for the FY 74 MCP. The present data on FTD is essentially the same as previously reported except as follows. FTD has acquired 13,000 SF of ASD space, and 7,000 SF of storage space. FTD previously projected personnel level of 1755 for FYs 1973 thru 1976 has been increased to 1755 in FY 73, 2001 in FY 74, and 2123 in FY 75.

Although an AFSC directed study concluded relocating FTD to Patrick AFB, Florida, was feasible and cost effective, the Air Force decision to retain the FTD at WPAFB was reportedly on the basis it would be more costly to move them into Patrick AFB facilities comparable to those which would be constructed at WPAFB.

C. AIR FORCE MATERIALS LABORATORY (AFML).

The AFML is responsible for AF RDT&E efforts for materials. It utilizes 272,000 SF in eleven buildings which are occupied by 415 AFML personnel and about 190 contractor and other personnel engaged in AFML efforts.

A marked increase in the AFML annual funding level $55,000,000 is projected in FY 74 and FY 75. Although these AFML projections are subject to AFSC scrubbing,an increased workload is anticipated.

Phase I of a new Materials Laboratory (FY 72 MCP) is under construction. Phase II ($17,980,000), planned as a FY 77 MCP candidate, will complete the foreseeable AFML facility requirements.

D. AIR FORCE AVIONICS LABORATORY (AFAL).

AFAL is responsible for development of avionics technology, is involved in related advanced development programs and provides avionics support thru the systems acquisition phases. It is located in 609,000 SF of space in twelve buildings.

AFAL authorized FY 73 manpower (831) is projected to be 950 in FY 73, 975 in FY 74, and 1000 in FY 75. AFAL is a Project Reflex Lab wherein manpower levels are controlled fiscally rather than by both manpower and financial controls. AFAL has only one MCP project. It is identified as AVLAB III, a FY 75 candidate having an estimated MCP cost of $16,325,000 million. AVLAB I was approved in the FY 65 MCP and AVLAB II, an addition, was approved in the FY 68 MCP.

AFAL funding level was $89,000,000 and $91,000,000 for FY 71 and FY 72 respectively. They project an increase to around $110,000,000 which is subject to AFSC scrubbing.

E. AIR FORCE FLIGHT DYNAMICS LABORATORY (AFFDL).

AFFDL is responsible for planning and executing the AF exploratory

and advanced development programs for aerospace flight vehicle structures, flight mechanics, flight control, vehicle dynamics, vehicle equipment, and vertical short takeoff and land (VSTOL) technology. It utilizes 26 buildings (747,000 SF) which are occupied by 979 AFFDL employees and 184 contractor and support personnel.

The AFFDL projects a substantial (300%) increase in their funding level by FY 77 on the basis of an AF Chief Scientist Report. This unconstrained projection will be "scrubbed down" by AFSC. Actual FY 72 funding was about $68,000,000.

Six projects, total estimated cost $27,966,000, have been identified as FY 74-76 MCP candidates. The Investigative Staff noted that part of the MCP requirements might be satisfied by space to be vacated on completion of the AFFDL FY 73 MCP item presently under construction. The Investigative Staff was advised one of the projects ($10,875,000, FY 76 MCP) would probably be cancelled.

F. AIR FORCE HUMAN RESOURCES LABORATORY (AFHRL), ADVANCED SYSTEMS DIVISION.

The function of the Advanced Systems Division is to conduct exploratory and advanced development efforts on human resources in systems development, simulation techniques, training for advanced systems, and technical data for maintenance. These efforts contribute to improved human performance in Air Force systems and operations.

This Division has 46 assigned personnel and occupies one 21,600 SF building. The Division's workload projection is rather constant with funding averaging about $6,000,000 yearly.

The Investigative Staff was advised by an Air Force official that it would be an improvement to consolidate this Division with AFHRL Headquarters. (See Section 15, this report).

On the understanding the building they now occupy is scheduled for demolition, the Advanced Systems Division foresees an MCP project to modify some building to serve their needs. The Investigative Staff determined their existing building is not on the FY 73-FY 77 disposal list.

G. AIR FORCE AEROPROPULSION LABORATORY (AFAPL).

The AFAPL is responsible for planning and executing the Air Force exploratory and advanced development programs for turbine engine propulsion, ramjet propulsion, power generation, electric and advanced propulsion (non-chemical), fuels, lubricants, and hazards. It has 396 employees and occupies 690,000 SF in 23 buildings.

AFAPL funding level was relatively stable at about $50,000,000 from FY 68 through FY 72. AFAPL projections average about $50,000,000 through FY 75.

In addition to the above the AFAPL received $3,000,000 on a prototype engine program in 1972. AFAPL projection on this program is $22,000,000 for FY 73 and $31,400,000 for FY 74, bringing the projected total to over $70,000,000 in FY 73 and over $80,000,000 in FY 74.

AFAPL has identified five projects, estimated cost of $12,834,000, as candidates for the FY 74-76 MCP.

H. AEROSPACE RESEARCH LABORATORY (ARL).

ARL is responsible for planning and executing major Air Force in-house research programs in the various areas of mathematical, physical and engineering sciences. ARL occupies one building (105,000 SF) and 26 relocatable structures.

A recent ARL manpower cut of 25 percent reduced their strength to 245. Space being vacated as a result of the reduction is not included in the above. ARL has 110 contract employees in addition to their 245 personnel. The ARL workload expressed in terms of fund allocation was projected to drop slightly in FY 73 and FY 74. FY 72 funding, $12,596,000, was projected to be $12,469,000 for FY 73 and $12,488,000 for FY 74 based on dollar constraints imposed by AFSC. ARL has not identified MCP requirements.

The Investigative Staff inquired as to whether the ARL High Reynolds Number Facility would serve the AFARL High Reynolds Number Facility requirements. The AFFRL project has been described as a "backyard" facility but the estimated cost of $4,600,000 makes it appear otherwise.

I. 6570TH AEROSPACE MEDICAL RESEARCH LABORATORY (AMRL).

AMRL, an Aerospace Medical Division organization conducts human engineering and biomedical research on human tolerances and human performance capability to establish design criteria for Air Force equipment.

It occupies 237,000 SF in 19 buildings at WPAFB and has 307 authorized personnel and about 125 contract personnel, including those personnel at the AMRL Operating Location at Holloman AFB.

The AMRL yearly funding level of approximately $13,000,000 is projected to remain constant for the next few years.

An AMRL FY 73 MCP project for a Human Impact Facility ($390,000) was not approved by Congress. AMRL has identified four additional items having an estimated cost of $5,479,000 as candidates for the FY 74-76 MCP.

6570TH AMRL OPERATING LOCATION (AMRL-OL).

This unit, consisting of five Air Force and 16 contractor personnel, occupies five buildings having a total of 9,940 SF and operates a deceleration track facility. The Investigative Staff questioned whether or not the AMRL Human Impact Facility and the AMRL-OL deceleration track could be consolidated. The Investigative Staff is of the opinion that serious consideration should be given to consolidating the two activities prior to resubmission of any additional MCP requests.

XV. BROOKS AIR FORCE BASE, TEXAS.

Brooks AFB consists of about 1352 acres and 151 buildings, and represents an investment cost of $34,800,000 and a replacement cost of $78,300,000. Aerospace Medical Division (AMD), is the host organization and the Headquarters Human Resources Laboratory is the primary tenant. Major elements of AMD at Brooks are the Headquarters and the School of Aerospace Medicine. These two organizations plus the Air Base Group support are authorized 1982 people which is anticipated to remain stable. The Headquarters occupies 65,330 SF of administrative space in nine buildings and the School of Aerospace Medicine occupies 663,178 SF of space in 40 buildings, eight of which are temporary structures. The School of Aerospace Medicine is dedicated to medical support of man in aircraft and space vehicles, thus 98% of their space is medical laboratory and training space. The workload for the school is expected to remain stable.

Wilford Hall Medical Center, the Air Force's largest hospital, is a component of AMD located at Lackland AFB. The Center's mission, in addition to a comprehensive medical care program, is to assist the School of Aerospace Medicine in its education and clinical research programs. The Center has an authorized strength of 3,186 people and consists of 785,440 SF in 60 separate buildings, 38 of which are temporary structures. Both the out-patient and in-patient workloads of this hospital have increased steadily with population growth. A 457,100 SF addition and a 210,400 SF alteration to the composite medical facility at an estimated cost of $39,680,000 is proposed for FY 75.

The Headquarters of the Air Force Human Resources Laboratory (AFHRL) at Brooks AFB consists of 50 people and occupies 13,111 SF of office space in two temporary, renovated officers quarters. This laboratory is responsible for basic research and development programs in the areas of personnel management, training, and education. The Laboratory has operating Divisions at Lackland AFB, Texas; Williams AFB, Arizona; Lowry AFB, Colorado; Wright-Patterson AFB, Ohio; and Alexandria, Virginia. Inasmuch as AFHRL's Human Resources Laboratory FY 73 MCP Project was not approved by Congress and in view of the availability of 150,000 SF of administrative space at Kirtland AFB, the Investigating Staff is of the opinion that consolidation and relocation of all AFHRL divisions (except those at Williams and Lowry AFBs) at Kirtland AFB should be given serious consideration by AFSC.

Eighteen military construction projects have been identified as FY 74 - FY 77 requirements at Brooks AFB by AMD.

XVI. REALIGNMENTS, CONSOLIDATIONS, RELOCATIONS.

Officials at Headquarters Air Force were reluctant to discuss this subject because of the sensitivity of such information as it affects people, whole communities, property values and because such decisions are based on budgetary and force structure considerations which were not known for FY 74. In commenting on the relocation of Air Force Technical Applications Center (AFTAC)

to Patrick AFB, an Air Force official stated this was in conformance with the policy of reducing military presence in the National Capital region and further confirmed that it was an OSD decision to allocate the vacated AFTAC facility in Alexandria, Virginia, to the Defense Nuclear Agency.

Headquarters AFSC officials did verify the completed move of the Civil Engineering Center, involving 186 people, from Wright-Patterson in July 1972 to Tyndall AFB, Florida, but under the control of AFSC. They also verified the impending move of the aircraft, crews and maintenance personnel from the 6511th Test Group at El Centro to Edwards AFB, California. AFSC further advised that relocation of flight activities at Los Angeles, California, to Edwards AFB, California, was under consideration.

XVII. RELATED WORK AND FACILITIES.

Major instances of identical or closely related work performed by or for other services or agencies are as follows:

NASA's Flight Research Center and the Army's Aviation Systems Test Activity are both located at Edwards AFB and utilize Edwards AFB facilities such as the flight test range and Test Pilot School.

The Joint Parachute Test Facility at El Centro, California, used by all the Services.

NASA Jet Propulsion Laboratory located with the AFRPL at Edwards AFB.

The establishment of the nuclear community, the military services, Defense Nuclear Agency and AEC around Los Alamos, New Mexico, and the resulting beneficial close working relationship.

The Aeronautics and Astronautics Coordinating Board identification of major environmental testing facilities for cooperative NASA/Services use.

The utilization of both Eastern Test and Western Test Ranges for Air Force and other Services, NASA, Advanced Research Projects Agency, United Kingdom and NATO missile launches.

General REILLY. Yes, sir.

UNREALISTIC PLANNING AT INSTALLATIONS

Mr. SIKES. The report indicates that the AFSC requires each division and test center to submit documents projecting resources believed required to meet future goals. It was noted these documents were not uniform in that some represented "wish lists" while others were confined to hard requirements. General Reilly, you haven't had an opportunity to study this report, but can you tell us prior to studying the report what is being done to make certain that all such planning documents are submitted under the same criteria?

General REILLY. If I may, Mr. Chairman, I will call on Colonel Stanton.

Mr. SIKES. All right.

Colonel STANTON. The headquarters of AFSC actually issues internal planning guidelines to the field concerning the determination of the individual mission elements, resources, that is, dollars, personnel, equipment, facilities, and so forth. They do provide common standard guidelines to the field. The peculiarities of course deal with the mission peculiarities and with the task to be performed, type peculiarities.

They leave the field a good bit of latitude in proposing the resources that they require. This evidently gives rise to the fact that with differences in mission and personnel and objectives in field organizations it would be very difficult to expect the total uniformity of response.

Therein lies perhaps the charge of the wish list, but let me assure you, sir, that this wish list gets much, much scrubbing between its initial formulation and the final presentation and particularly in this committee in terms of facilities.

The answer, of course, is continual scrubbing and review and prioritizing and justification on the part of the headquarters elements and then in terms of facilities. That sort of thing happens in General Reilly's committee and through the Secretaries of the Air Force and up through OSD prior to coming before this committee, so the so-called wish list items are certainly scrubbed out of the proposals.

Mr. SIKES. Are dollar constraints imposed on each AFSC division, et cetera?

Colonel STANTON. Yes, sir, they are.

VACANT OR UNDERUTILIZED AFSC SPACE

Mr. SIKES. Submit for the record a listing of available space at AFSC facilities and your plans for the effective utilization of this vacant space.

[The information follows:]

AVAILABILITY AND UTILIZATION OF SPACE, AFSC

With the shift in military priorities and emphasis to conventional type limited war weapon systems, primarily caused by the SEA conflict, the Air Force research and development role underwent immediate and drastic changes to meet these new objectives. One impact of this redirection of activity is the reduction in the use of existing facilities in the ballistic missle and space program complexes. In response to these circumstances, the Air Force initiated action to identify the expensive and highly specialized facilities whose potential use, configuration, and remote location was such as to require that the facility be prop-

erly maintained and retained for support of future programs. In these instances, it was concluded that it would not be productive or economical to consider these facilities for possible alternative use. This includes facilities at the eastern test range (ETR) Cape Kennedy launch area and the Rocket Propulsion Laboratory at Edwards Air Force Base. The majority of the building area available for alternative use at Cape Kennedy is comprised of structures including missile assembly checkout buildings (hangar type design), launch complexes (block houses, ready buildings, etc.). In the selection of activities to use these available facilities, we have insured that the newly assigned functions are compatible with the technical mission of the ETR. Consistent with this, the contractor who operates the ETR has relocated his activities to Cape Kennedy from off-base locations. In addition, a portion of the Air Force management of ETR functions is now accommodated in facilities at Cape Kennedy. Furthermore, available space of a more general purpose nature on Patrick Air Force Base has been used to accommodate the Air Force technical applications center (AFTAC) and the Department of Defense Race Relations Institute (DRRI). The remaining general purpose space at Patrick Air Force Base represents portions of occupied buildings and is located in seven different structures. A similar situation exists at the Air Force Rocket Propulsion Laboratory which is located within the Edwards Air Force Base perimeter but is actually 22 miles away from the main area. In this situation, the current laboratory activities have been centralized and the balance of the facilities at this relatively remote location have been retained for future use. At Kirtland Air Force Base, the merger of this base with the Sandia Base, has expanded the scope of the existing facilities available for use to support Air Force missions. To effectively utilize these additional facilities, the Air Force has relocated the centralized contract management funetions to this base and announced the transfer of mission aircraft which support certain electronic activities and the relocation of an academic and training activity to Kirtland Air Force Base. These missions and functions will fully occupy a majority of the space that is available in the Kirtland Air Force Base complex.

Mr. SIKES. Is there unused or unutilized space at these facilities?

General REILLY. You are speaking of the Systems Command installations, Mr. Chairman?

Mr. SIKES. Yes, sir.

General REILLY. Go ahead.

Colonel STANTON. Sir, I would say from our viewpoint other than perhaps at Cape Kennedy or possibly to a lesser extent the rocket propulsion lab, that we feel there can really be no proper charge levied on overbuild and that there is a misunderutilization of space. I would like to remind you, sir, that in the formative years of a massive effort in research and development in the missile and space world we developed facilities totally utilizing, in those formative years, our technology and expertise, and the payoff, I think is evident in terms of our defense posture and our détente with Russia.

General REILLY. Mr. Chairman, may I add something there?

Mr. SIKES. Yes.

General REILLY. While it is true that the very technical facilities that are designed to satisfy the peculiar requirement of a given weapons system that may have just a one-time use, we do have large quantities of administrative space associated with those programs. I think the Air Force and Systems Command has been trying to make the best use of that administrative space as evidenced by various changes in activities that go on, activities going into Kirtland Air Force Base, for example, and utilization of vacated facilities at Patrick. We are constantly attempting to insure that we make the best use of vacated space prior to building new at other locations.

AUTHORIZED AND CURRENT PERSONNEL STRENGTH BY ACTIVITY

Mr. SIKES. Provide a list showing authorized strength and current personnel assigned at each major AFSC activity. Are manpower reductions or increases planned during the next 3 years? If so, provide details. In those instances where the number assigned exceeds the authorization, provide details as to why this is the case.

[The information follows:]

AFSC Authorized and Assigned Strength

Any adjustments shown are to AFSC strengths only at these installations and do not necessarily indicate that similar adjustments are being made to total base population.

AIR FORCE SYSTEMS COMMAND

LOCATION: Andrews AFB, Maryland
MAJOR UNITS: HQ, AFSC
6590th Support Sq

Authorized		Assigned	
MIL	CIV	MIL	CIV
1120	978	968	935

LOCATION: Arnold Engng Dev Center, Tenn
MAJOR UNITS: Arnold Engng Dev Center

Authorized		Assigned	
MIL	CIV	MIL	CIV
81	147	90	144

LOCATION: Brooks AFB, Texas
MAJOR UNITS: Aerospace Medical Division
Air Force Human Resources Lab

Authorized		Assigned	
MIL	CIV	MIL	CIV
950	808	960	792

ACTIONS PLANNED:

Reduction (Employment)	--FY 74	19 CIV
Conversion	--FY 74	19 MIL to CIV

LOCATION: Edwards AFB, California
MAJOR UNITS: Air Force Flt Test Center
Air Force Rocket Propulsion Lab

Authorized		Assigned	
MIL	CIV	MIL	CIV
3330	2064	3429	2018

ACTIONS PLANNED:

Reduction (Employment)	--FY 74	131 CIV
Increase (A/C Maint)	--FY 74	150 MIL
Conversion	--FY 74	66 MIL to CIV

LOCATION: Eglin AFB, Florida
MAJOR UNITS: Armament Development and Test Center
Air Force Armament Lab

Authorized		Assigned	
MIL	CIV	MIL	CIV
4430	3041	4747	3012

ACTIONS PLANNED:

Reduction (Employment)	--FY 74	225 CIV
Phase Down of Programs	--FY 74	98 MIL
Conversion	--FY 74	151 MIL to CIV

LOCATION: Griffiss AFB, New York
MAJOR UNITS: Rome Air Development Center

Authorized		Assigned	
MIL	CIV	MIL	CIV
346	1133	335	1132

ACTIONS PLANNED:
- Reduction (Employment)--FY 74 — 26 CIV
- Phase Down of Programs--FY 74 — 49 MIL

LOCATION: L. G. Hanscom Field, Massachusetts
MAJOR UNITS: Electronics Systems Division
Air Force Cambridge Rsch Lab

Authorized		Assigned	
MIL	CIV	MIL	CIV
1703	3068	1819	2972

ACTIONS PLANNED:
- Reduction (Employment)--FY 74 — 150 CIV
- Flight Line Closure --FY 74 — 156 MIL, 275 CIV
- Conversion --FY 74 — 47 MIL to CIV

LOCATION: Kirtland AFB, New Mexico
MAJOR UNITS: Air Force Special Weapon Center
Air Force Weapons Lab
Headquarters Air Force Contract Management Division

Authorized		Assigned	
MIL	CIV	MIL	CIV
3125	2703	3228	2551

ACTION PLANNED:
- Reduction (Employment)--FY 74 — 134 CIV
- Conversion --FY 74 — 95 MIL to CIV

LOCATION: Los Angeles Air Force Station
MAJOR UNITS: Space & Missiles Systems Organization
Satellite Control Facility

Authorized		Assigned	
MIL	CIV	MIL	CIV
1336	1013	1362	971

ACTIONS PLANNED:
- Reduction (Employment)--FY 74 — 9 CIV
- Conversion --FY 74 — 13 MIL to CIV

LOCATION: Patrick AFB, Florida
MAJOR UNITS: Air Force Eastern Test Range
6555th Aerospace Test Gp

Authorized		Assigned	
MIL	CIV	MIL	CIV
1649	1905	1819	1766

ACTIONS PLANNED:
- Reduction (Employment)--FY 74 — 7 CIV
- Conversion --FY 74 — 94 MIL to CIV
- Program Changes --FY 74 — -44 MIL
  (A/C Maint, Hospital and BOS)

LOCATION: Vandenberg AFB, California
MAJOR UNITS: Space & Missile Test Center
Satellite Control Facility
Contract Management Office

Authorized		Assigned	
MIL	CIV	MIL	CIV
639	493	634	502

ACTIONS PLANNED:
Reduction (Employment)--FY 74 34 CIV

LOCATION: Wr Wright-Patterson AFB, Ohio
MAJOR UNITS: Aeronautical Systems Division
Foreign Tech Division
Aerospace Research Lab
Avionics Lab
Flight Dynamics Lab
Aerospace Propulsion Lab
Materials Lab
Aerospace Medical Research Lab

Authorized		Assigned	
MIL	CIV	MIL	CIV
2772	8272	2792	8009

ACTIONS PLANNED:
Reduction (Employment)--FY 74 296 CIV
Phase Down of Programs--FY 74 53 MIL 38 CIV

The overage of military personnel is largely attributable to personnel in a transient status and therefore not present and available for duty. Other temporary overages or shortages may be caused by short term imbalances in specific skills or assignment adjustments in anticipation of program changes.

RELOCATION OF AIR FORCE TECHNICAL APPLICATIONS CENTER

Mr. PATTEN. When the decision was made to move the Air Force Technical Applications Center facility from Alexandria, Va., to Patrick Air Force Base, were studies conducted to determine if there were other facilities available, particularly at McClellan Air Force Base, which could accommodate AFTAC? If so, provide a copy of that study. If not, why was not a study made?

General REILLY. Colonel Reed, will you address that?

Colonel REED. There was no study that I am aware of that specifically addressed McClellan Air Force Base. The review centered to a great extent on the space at Patrick. The administrative type and technical space required was available there and in a central location.

There would not be that type of special space available at McClellan.

However, I know of no study we could provide you that specifically addressed McClellan Air Force Base as a possible location.

Mr. PATTEN. Is it true that there is a substantial AFTAC activity at McClellan at the present time?

Colonel REED. There is a squadron which does work in the AFTAC area, yes, sir.

Mr. PATTEN. How many AFTAC people are located there?

Colonel REED. I would have to provide that number for the record. I do not have that.

[The information follows:]

AFTAC PERSONNEL AT MCCLELLAN

AFTAC's 115th Technical Operations Squadron at McClellan Air Force Base currently is authorized 80 officers, 435 enlisted and 21 civilian personnel.

General REILLY. I think that number was materially reduced when they moved to Patrick.

Colonel REED. It was somewhat reduced in our most recent base realinement posture when some of these activities were relocated from McClellan to Patrick from this operations squadron that you refer to.

Mr. PATTEN. When AFTAC vacated space in Alexandria, the Air Force proposed to utilize the space for some space-critical Air Force components. Instead, it was taken over by the Defense Nuclear Agency, Does anybody know why?

General REILLY. There was a Department of Defense decision.

Colonel REED. Yes, sir, that was arbitrated at the Department of Defense level and the decision was reached at the Department level.

POSSIBILITY OF RELOCATING ALL OR PART OF SYSTEMS COMMAND HEADQUARTERS FROM WASHINGTON

Mr. PATTEN. Since there is a shortage of space in the Washington, D.C. area, what consideration has been given to the relocation of Systems Command components to underutilized Air Force facilities away from Washington?

Colonel REED. Again, Systems Command Headquarters, which is the predominant element in the Washington area, is an entity and it requires coordination within its staff as well as external to its command. To fracture that out, for example, move elements from Andrews to other bases, would present the Systems commander with an unten-

able position in which he would have elements of the staff perhaps located anywhere from Edwards to Patrick back up to Andrews.

We do not have a Systems Command R. & D. activity in the Washington area that I am aware of.

Mr. PATTEN. Are all of the Systems Command activities in Washington directly included in the headquarters organization?

Colonel REED. To my knowledge that is true, sir.

Mr. PATTEN. How large is the headquarters organization?

Colonel REED. In total terms of population?

Mr. PATTEN. Yes.

Colonel REED. I would have to provide it for the record. I do not know the total.

[The information follows:]

AFSC HQ STRENGTH

Headquarters Air Force Systems Command (AFSC) is located at Andrews Air Force Base, Md. Its authorized manpower strength is 762 military and 755 civilian authorizations. Other major AFSC activities located largely in the Washington area, but not part of HQ AFSC are the 6590th support squadron, Andrews Air Force Base, and the Air Force Office of Scientific Research, Rosslyn, Va. The authorized manpower strength of the 6590th support squadron is 358 military and 223 civilian authorizations. The authorized manpower strength of the Air Force Office of Scientific Research is 50 military and 101 civilian authorizations.

Mr. PATTEN. Could you also provide the number of square feet of administrative or laboratory space which they occupy?

Colonel REED. Yes, sir.

[The information follows:]

AFSC HQ SQUARE FEET OF ADMINISTRATION AND LABORATORY SPACE

AFSC Headquarters personnel occupy 238,900 square feet of floorspace for administrative purposes. This excludes the lobby, hallways, rest rooms, stair wells, cafeteria, personnel support area, and storage space. There is no laboratory space occupied by AFSC headquarters personnel.

MANNED ORBITING LABORATORY FACILITIES

Mr. PATTEN. Has the manned orbiting laboratory facility at Vandenberg Air Force Base ever been used?

General REILLY. Mr. Chairman, the building support facilities, are in use today by elements of the test activity located at Vandenberg. The launch complex itself has not been used.

Mr. PATTEN. What was the cost of this facility?

General REILLY. The support facilities amounted to about $5 million, Mr. Chairman.

Mr. PATTEN. What plans do you have for utilization?

General REILLY. The support facilities are in use today by elements of Air Force Systems Command. The launch complex itself is being studied for possible use in the Space Shuttle program when that portion of it is assigned to the Air Force.

Mr. PATTEN. Has a study been conducted or plans formulated to consolidate the space and missile systems organization in the MOL facility?

General REILLY. There has been a study conducted. The results of that study indicated that it was in the best interests of the systems

command to remain in the Los Angeles area. I can provide details of that if you would like.

Mr. PATTEN. Yes.

[The information follows:]

PLANNED USE OF MOL FACILITY

An evaluation was made several years ago of the feasibility of moving SAMSO and Aerospace Corp. to Vandenberg. The MOL facilities were not large enough to house the Space and Missile Systems Organization. It was determined that major modifications to existing facilities and new construction would be required to house the areospace contractor. The total cost of the move would have exceeded $55 million. (Includes moving people, equipment, as well as the construction.)

The Space and Missiles Test Center (SAMTEC) and SAMTEC contractors have been moved from old, substandard buildings on Vandenberg into the MOL facilities. The Air Force then disposed of these substandard buildings.

STATUS OF OVERALL SYSTEMS COMMAND UTILIZATION STUDY

Mr. PATTEN. At the same time that the staff study was initiated the Air Force did, on its own, as I understand it, a general study of its utilization of systems command facilities. Is that correct?

General REILLY. I think so; yes.

Mr. PATTEN. In the questions which have been developed here there are a lot of instances in which the committee is really asking how have you done studies, are you looking at this or that possibility, have you done a specific study in a particular instance?

To some extent you have done a general overall study but if your answers to these questions are "No; we have not done a study," does that imply that you didn't look at this possibility in the general overall study of your systems command facilities?

General REILLY. You are speaking of the entire command and all of their installations?

Mr. PATTEN. Right.

General REILLY. Colonel Stanton.

Colonel STANTON. No, sir; the AFSC overall study that was envisioned a year ago did not come to fruition. There have been lesser studies on mission elements and relocations and consolidations, some of which have been reflected in the recent Secretary of Defense's announcement, but the full total command overview study has not been conducted, sir.

Mr. PATTEN. Has it been cancelled? Has it been taken over by events in terms of base realignments——

Colonel STANTON. I don't know the exact status of it, whether it will be reinitiated, but at the present time it is inactive.

UTILIZATION OF ARNOLD ENGINEERING DEVELOPMENT CENTER

Mr. PATTEN. The investigative report noted that the number of test hours at Arnold Engineering Development Center is considerably under the 80,000 hours per year capability. Provide for the record the number of test hours of operation for fiscal years 1968 through 1972, and tell us what you are doing to bring this facility to its full potential.

General REILLY. Yes, sir.

[The information follows:]

AEDC TEST HOURS

Total occupancy hours of testing at AEDC by fiscal year is as follows:

Fiscal year:	*Total occupancy hour*
1968	57,604
1969	49,968
1970	39,322
1971	28,817
1972	31,430

The 80,000 hours is an idealistic maximum that requires exact scheduling and exact mixing of testing requirements from the three technology categories of propulsion, aerodynamic, and space. A more realistic zone of optimal test operation would be considered to range from 45,000 to 60,000 hours. The occupancy hours programed and planned for fiscal year 1973 and 1974 are within this optimal range. Maintaining test operation within this range requires a continual tradeoff between established test requirements and available resources. AEDC is a support organization and as such is responsible to manage its facilities and available resources to meet the test requirements of Air Force, other government organizations, and industry.

DISPOSITION OF ENIWETOK TEST SITE

Mr. PATTEN. Do you still plan to relinquish the Eniwetok site to the trust territory?

General REILLY. Yes, sir; it will be turned over to the Defense Nuclear Agency July 1 of this year for cleanup and decontamination and then be passed to the trust territory, I think, in January of next year.

Mr. PATTEN. What will become of the facilities?

General REILLY. A number of the facilities have been removed, those that could be removed, and taken to Canton Island where we are conducting range activities at the present time. The remaining facilities will simply go with the transfer to the trust territory.

Mr. PATTEN. What is their value?

General REILLY. We invested about $12 million, that is, first cost, in all the facilities. Just what the residual value will be I don't know. I can furnish that.

[The information follows:]

RESIDUAL VALUE OF ENIWETOK FACILITIES

The 1973 residual value is less than $1 million.

USE OF TRAILERS AT EDWARDS AIR FORCE BASE

Mr. PATTEN. The test center at Edwards Air Force Base uses rented facilities for the purpose of meeting some flight line space requirements. How much have you spent for trailers over the past 3 years?

General REILLY. We have been averaging, Mr. Chairman, about 10 or 12 trailers under rental each year at $150 a trailer per month. This represents about $18,000 a year in the last few years.

Mr. PATTEN. What is your projection on trailer expenditures for the next 4 years?

General REILLY. I would assume it would be the same or less, Mr. Chairman. I can research that for you.

[The information follows:]

TRAILER PROJECTIONS

The current projection for trailer requirements for fiscal year 1974 is a maximum of 34 at a cost of $64,800. No firm projections for trailer requirements beyond fiscal year 1974 are available at this time.

Mr. PATTEN. Why do you rent facilities instead of building them?

General REILLY. Well, these trailers are used in the various test areas at Edwards where offices can be set up very close to the actual tests that are being conducted. With new aircraft with contracting or with industrial firms constantly in there, this activity is going on all the time and this provides a very flexible, a very convenient means of having office space, you might say, right down on the flight line where the test work is taking place, and it is constantly changing from one area to another on the base.

Mr. PATTEN. Can you justify it economically for the record?

General REILLY. Yes, sir. I think we can.

[The information follows:]

ECONOMIC JUSTIFICATION FOR USE OF TRAILERS—EDWARDS AFB TEST AREA

In addition to having the advantage of being relocatable, trailers are more economical than new construction when the requirement does not exceed 8 months. The only time we use trailers is when we are faced with unforeseen requirements with an anticipated relatively short duration.

VACANT SPACE AT KIRTLAND AIR FORCE BASE

Mr. PATTEN. Our investigative staff noted an abundance of vacant space at Kirtland Air Force Base. Has consideration been given to consolidating human resources laboratory activities there?

General REILLY. Yes; studies were made, and consideration given, to assigning the human resources research laboratory activity there. However, it was determined that it was best to remain in the San Antonio area. I might add, Mr. Chairman, that there have been recent changes which will affect the use of the space at Kirtland.

As you know, the contract management division was transferred from Los Angeles there some time ago and under our most recent announcement: Colonel Reed, could you elaborate on that, please?

Colonel REED. In the most recent announcement we advised that we had relocated some test aircraft from L. G. Hanscom, Mass., where we are discontinuing the flight line activity. Additionally, the school squadron for project transition, which is the program in which the airman exiting the service gets training in a civilian marketable skill if he doesn't have one. We are going from Forbes to Kirtland with that activity. This along with the CMD activity and the retention of the nuclear school that is run for the Defense Department effectively uses most all of the administrative and billeting space available in the Kirtland complex.

Mr. PATTEN. The investigative staff report indicates you have about 150,000 square feet of underutilized administrative space. Now, of the functions that you just mentioned which have moved in there, one is the flying function, another is the school function. The contract management division occupies how many square feet of administrative space?

Colonel REED. I would have to provide it for the record.
[The information follows:]

VACANT ADMINISTRATIVE SPACE—KIRTLAND

The contract management division occupies 105,000 square feet of administrative space.

Colonel REED. The contract management division is a rather large establishment occupying considerable computer space and space for administration. I am not aware of amounts of space in specific numbers and without comparing the data in the investigation report to the actual situation I couldn't comment at this time.

Mr. PATTEN. But the Air Force does consider this space will be fully utilized with the new missions to be moved in there?

Colonel REED. Yes, sir. In fact systems command did look at Kirkland's very hard specifically, as we inherited the Sandia complex from the Army we took some time to sort out the total property situation between Kirkland proper and what was Sandia to determine what was substandard and what could be relocated to adequate space and avoid construction. Also, what new missions could move in there. Systems command has evaluated this and has come up with such relocations as we have discussed. As far as we are concerned we are effectively using this space and do not foresee any large relocations of other missions into Kirtland.

Mr. NICHOLAS. In view of the overall shortage of administrative space, and I suppose the Air Force is like the other services in this regard, are you really using this effectively? I haven't seen it. I don't know if it is high quality administration space or not. I assume it might be.

Are you using this as effectively as it might be used if you moved some major activity into it?

Colonel REED. As I recall, having been down there approximately a year ago, for example, we used dormitory space and converted it to administrative space. High quality office space as you think of such as is in Crystal City or this type of space is not abundant. We took and used space that was there as a result of changing missions. For example, we had big reductions in the school activity which made dormitory space available. We converted that to administrative use.

Mr. PATTEN. When were the dormitories built? Are these all permanent structures?

Colonel REED. Yes; they are permanent structures.

Mr. PATTEN. And they have been converted?

Colonel REED. Yes; and that is primarily what CMD has gone into. There were no large buildings which were vacant with good environmental systems suitable for administration to my recollection.

Mr. PATTEN. Could you provide more details for the record?

Colonel REED. We will, sir.

[The information appears in the appendix of this volume.]

HUMAN RESOURCES LABORATORY FACILITIES

Mr. PATTEN. Were studies conducted to determine the impact on efficiency if all Air Force human resources laboratory activities were consolidated?

General REILLY. Yes, sir; studies were made.

Would you like that for the record?
Mr. PATTEN. Yes.
[The information follows:]

IMPACT STUDY ON CONSOLIDATION OF HUMAN RESOURCES LAB ACTIVITIES

Since its establishment in 1968, Headquarters Air Force Human Resources Laboratory (AFHRL) has been located at Brooks Air Force Base, Tex. The Laboratory's Personnel Research Division has been located at Lackland Air Force Base, Tex. The buildings currently housing these organizations were designed and constructed for a 5-year life more than 30 years ago. They no longer provide for long-term needs. Further, there are no other suitable quarters available.

To alleviate the problem and to consolidate functions and manpower between organizations, a plan was developed to build a joint use building at Brooks Air Force Base. The proposal envisioned consolidating many of the administrative functions of both organizations.

Incident to assumption of control of the Defense Nuclear Agency area and facilities contiguous with Kirtland Air Force Station, N. Mex., the possibility of moving both the AFHRL Headquarters and AFHRL Personnel Research Division to that location was given very serious consideration. This solution gave no consideration to certain adverse impacts on the effectiveness of the two elements. The driving force of the study was the ready availability of space. Ultimately, it was determined that such a move was not in the best interest of the Air Force. Many factors influenced this decision such as: Cost of the move, delay of critical programs, and loss of key personnel. However, the primary consideration was mission effectiveness.

The Laboratory was established in accordance with the basic conceptual guidance provided by the USAF Scientific Advisory Board which indicated that collocation with the user was the approach to pursue. The credibility of this approach has been repeatedly demonstrated by Government and industry. These organizations have shown that the maintenance of a technically innovative R. & D. program which has high acceptance and use of its products is best accomplished by geographical collocation between laboratory and the user. This policy has been scrupulously followed in structuring and locating the Laboratory's headquarters and its various divisions. The excellent results to date are an indicator of the soundness of this philosophy. The Laboratory's research products are now generating considerable more annual savings, particularly for the Air Training Command, than the Laboratory receives in R. & D. funding.

The San Antonio, Tex. area is the hub of Air Force personnel and training activities. The military personnel center, the primary Air Force personnel organization, and Air Training Command Headquarters are located at Randolph Air Force Base. The military training center, the site of all Air Force basic enlisted and initial officer training and the source of the preponderance of the Laboratory's test subjects, is located at Lackland Air Force Base. Therefore, because of the vital daily interplay between the Laboratory and the operational organizations and the contribution that collocation has made to Laboratory mission effectiveness, the decision was made to keep the Headquarters and the Personnel Research Division in the San Antonio area.

EDWARDS AIR FORCE BASE, CALIF.

Mr. PATTEN. Any questions on the systems command? If not, let us turn to Edwards Air Force Base, Calif.
Insert page 55 in the record.
[The page follows:]

1. DATE	2. DEPARTMENT	FY 19 74 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		EDWARDS AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE SYSTEMS COMMAND	FSPM	CALIFORNIA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1933	KERN	THREE MILES NORTHEAST OF LANCASTER, CALIFORNIA

11. MISSION OR MAJOR FUNCTIONS

AIR FORCE FLIGHT TEST CENTER

AIR FORCE ROCKET PROPULSION LABORATORY

AEROSPACE TECHNICAL DEVELOPMENT AND TRAINING GROUP (HEADQUARTERS COMMAND)

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
a. AS OF 31 December 72	622	3,104	2,199	0	0	32	57	0	6,014
b. PLANNED (End FY 76)	606	3,000	2,201	0	0	32	57	0	5,896

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	307,386	9,128	201,623	210,751
b. LEASES AND EASEMENTS	488	0	41	41
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				210,792
d. AUTHORIZATION NOT YET IN INVENTORY				3,571
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				889
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				22,500
g. GRAND TOTAL (c + d + e + f)				237,752

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE Priority b	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
310-614	Alter Rocket Propulsion Research Laboratory 18		LS	LS	889	LS	889
	TOTAL				889		889

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EDWARDS AIR FORCE BASE, CALIF.

The first base to be considered is Edwards Air Force Base, located about 3 miles northeast of Lancaster, Calif., and about 65 miles north northeast of Los Angeles, Calif. The planned use of this base is in support of the Air Force Flight Test Center, the Air Force Rocket Propulsion Laboratory, a Headquarters Command Aerospace Technical Development and Training Group, and miscellaneous research and test programs for the Army, Navy, and NASA. The requested program totals $889,000 for one project.

Construction is requested for alteration of an existing rocket propulsion laboratory to provide adequate environmental control. Alteration of air-conditioning, heating, and ventilation systems will provide necessary control for toxic chemical fume hoods, test cells, data processing center, and sensitive equipment as well as decontamination of toxic exhaust air. Today's deficiencies result from deterioration, increased environmental control requirements imposed by mission changes, and increased toxicity of today's propellants.

AFSC-Edwards AFB, Calif.—Design Information (Design Cost Estimated)

Project: Alter Rocket Propulsion Research Laboratory:	
Design cost	$45,500
Percent complete, July 31, 1973	80

ROCKET PROPULSION LABORATORY ALTERATION

Mr. PATTEN. The request is for $899,000 to alter the rocket propulsion laboratory. Where is this work now being done?

Colonel STANTON. The work that is referred to is now being done in this facility that we are asking for the alteration of.

Mr. PATTEN. What problems have arisen because of the lack of the requested facilities?

Colonel STANTON. We have a toxic hazard problem because as the technology on rocket propellants has changed over the years to more toxic propellants the original air-conditioning system has insufficient flow in terms of feet per minute across the chemical loads that remove the toxic odors.

Therefore, we create a rather unsafe working condition for our personnel.

Second, the reliability of our test data due to frequent temperature fluctuations is invalidated and there is risk as to its liability and use and we are really trying to do with an outmoded capability facility.

Mr. PATTEN. How does this facility differ from the fuels and lubricants laboratory at Wright-Patterson Air Force Base?

Colonel STANTON. They each have completely independent domains. The only parallelism is the fact that they do deal with propellants. In the case of the fuels and lubes laboratory at Wright-Patterson their domain is the research and development and acquisition of air-breathing propellant fuels and lubes.

In terms of Edwards Rocket Propulsion Laboratory, their domain is rocket propellants, solid, liquid, and hybrid.

VACANT SPACE AT ROCKET PROPULSION LABORATORY

Mr. PATTEN. The committee understands there is approximately 115,000 square feet of vacant space at the rocket propulsion laboratory. Could not this space be utilized if arrangements, either flight scheduling or otherwise, were made to allow for restricted travel across the lakebed for convience of travel to the remote location?

Colonel STANTON. Sir, I think we sort of have a parallel situation. I would assume that the majority of the unused facilities are the rocket propulsion test stands built out in the desert and their supporting facilities. They are unique in capability. They have effectively served their R. & D. usefulness as far as the peak workload.

They are a national asset. They will be utilized. They are held in more or less a storage capability and will be utilized upon any national need and that installation represents a national capability for use by NASA, the Air Force, or the other services.

Since they are unique facilities their general utilization in terms of normal administrative or Air Force mission activities is really not compatible with the DOD position of retaining them in a position for immediate use in the R. & D. mode.

To build a road across a dry lake is not particularly economical or practical since it really wouldn't serve much of a useful purpose.

Mr. PATTEN. The investigative staff indicates that the 115,000 square feet are vacant office space and the way you have described these facilities would indicate that they were testing facilities and so forth.

Obviously you can't use a test facility for office space.

Colonel STANTON. I would have to research it for the record but let me point out one other thing. This rocket site is 30 miles remote from the main Edwards Air Force Base installation and you pay that penalty.

[The information follows:]

VACANT SPACE AT ROCKET PROPULSION LAB

There are 18 vacant buildings at the Air Force Rocket Propulsion Laboratory Site having an aggregate of 116,549 square feet. The major part of this space, 71,058 square feet. Is contained in 13 specialized facilities (Missile Assembly and Missile/Space Research Test); and mission support (hangars—shops) buildings. The remaining 5 buildings consist of 3 office buildings, 1 warehouse and 1 bachelor quarters building. The latter two buildings have been previously converted to office space. The total administrative space in these five office buildings is 45,491 square feet.

Mr. PATTEN. Is that the direct route or is that going around trying to avoid the——

Colonel STANTON. There really is no direct route to that rocket propulsion site. You sort of go around.

Mr. PATTEN. Could you provide a map of it?

Colonel STANTON. Yes, sir.

[The map was kept in the committee's files.]

Mr. PATTEN. You know, I was out there.

Colonel STANTON. It is an interesting place.

General REILLY. You can look off across the lake, a more direct route. It is not a real road. It is just a way you can get there.

Mr. PATTEN. Could you run a bus across there?

Colonel STANTON. It is a dry lake but in periods of wintertime that lake becomes flooded.

ENCROACHMENT

Mr. PATTEN. Do you have a requirement for additional land at Edwards Air Force Base?

General REILLY. Mr. Chairman, we do have some growing encroachment problems at Edwards. However, we have no requirement for land per se at the moment in the area surrounding the base.

Mr. PATTEN. How about in the air. Do you have an encroachment problem?

General REILLY. No; I don't think there is any great problem in terms of air encroachment. However, there is potential for one developing with the development of the airport at Palmdale, which is nearby.

Mr. PATTEN. Anybody who saw Edwards 30 years ago couldn't believe you would have an encroachment problem.

General REILLY. No; that is right.

Mr. PATTEN. The investigative staff comments that a fiscal 1975 military construction project identified by Edwards calls for the purchase of some 27,000 acres of land, but apparently this isn't rated as a high priority within the Air Force.

General REILLY. This could be in terms of our compatible use zone program wherein authorization would be requested to acquire interest in that land if necessary.

Mr. PATTEN. It has quite a high price; about $44 million.

General REILLY. Yes.

Mr. PATTEN. What is the problem which gives rise to this?

General REILLY. Mr. Jonkers, would you please address the growing encroachment problem at Edwards that is leading to a potential requirement for land in the 1975 program?

Mr. JONKERS. Yes, sir. In the southeast corner of the base, the position impact range targets, there is a growing civilian development and land is being developed and sold in smaller lots. If this continues we are going to have a definite safety problem there, misfires and these sorts of things.

Edwards has been getting together with the local communities and trying to work on zoning arrangements and even though we have had many promises of cooperation we haven't had a concrete offer yet.

Of course, as the population increases we may run into problems because of pressures on the zoning commission.

RELOCATION OF 6511TH TEST WING ACTIVITIES

Mr. PATTEN. Has a decision been made as to the relocation of the 6511th Test Wing to Edwards from El Centro? What would be the economic considerations if you decide to move or to remain at El Centro?

Colonel STANTON. We did not move the 6511th Test Wing. We did move the aircraft and the aircrew and some of the maintenance personnel and consolidated with the Edwards flying operation for conservation in mission use of the aircraft and maintenance resources.

Mr. PATTEN. What would be the economic factors involved in a decision to move or to remain at El Centro?

General REILLY. May we supply that for the record, please.

Mr. PATTEN. Yes.

[The information follows:]

ECONOMIC JUSTIFICATION ON RELOCATION OF 6511TH TEST GROUP

The joint parachute test facility (JPTF), established in 1951, in comanaged by the USAF 6511th Test Group and their Navy counterparts, the naval aerospace recovery facility. The JPTF is responsible for test and evaluation of Army, Navy and Air Force parachutes and other retardation devices. Colocation of the

Air Force and Navy elements is mandatory to accomplish the short- and long-range planning for scheduling joint use of the test and evaluation capability and for joint development of new test devices, ranges, and test instrumentation. Relocation of the 6511th Test Group would reduce the JPTF test and evaluation capability and necessitate eventual establishment of additional range and instrumentation capability to satisfy Army and Air Force test and evaluation requirements. In addition, relocating the entire 6511th Test Group would entail considerable expense. It is therefore not considered justifiable, either on management or economic principles, to move the entire 6511th Test Group from El Centro. By DOD direction, the combined Navy/Air Force facilities at El Centro are being designated the national parachute test range effective July 1, 1974, and will be operated as a national range.

To reduce the cost of operating and maintaining the 6511th test bed aircraft supporting the JPTF mission, the aircraft and associated personnel were consolidated with the Edwards AFB flying and maintenance operations. This consolidation, completed in the third quarter of fiscal year 1973, is estimated to result in annual savings in excess of $140,000 as well as improve the aircraft utilization.

ENCROACHMENT AT AIR FORCE BASES

Mr. McKAY. Mr. Chairman, would you yield?

In light of an earlier statement your made about encroachment of populations near Air Force test areas, Air Force Bases, do you know how many bases are having this problem, or are they all having it?

General REILLY. Not all of them, Mr. McKay. Within the Air Force we have something over 80 bases which have an encroachment problem. Either a real problem now or one that is developing. In most instances it is due to growing community development adjacent to the bases.

Mr. McKAY. Do you have any that you anticipate will have to be closed down in the near future because of this encroachment?

General REILLY. No, sir, we don't see any closures imminent in the immediate future. As you may recall, last year we brought before the Congress our first request for authorization and for some appropriations to permit us to go into our compatible use zone concept which we hope to stem the tide of development around our bases.

Mr. McKAY. Your green belt?

General REILLY. Yes, sir, and we are continuing that this year. We are hopeful that with the start we are making and that with a concerted effort throughout the Air Force and by working with the communities through zoning on the part of the communities the problem can be avoided.

Mr. McKAY. What kind of success are you having or have you had enough time to measure it?

General REILLY. Sir, we are having good success. We think that with the three bases that we had in last year's program, that is, Tinker, in Oklahoma, Altus in Oklahoma, and Williams, in Arizona, we will be able to achieve our objectives without recourse to acquiring any land interests or even exchanging land.

But we are not so naive as to say that expense may not be involved in some particular instances.

Mr. McKAY. Well, I just have felt some concern. As a result of these impactions have you changed your planning for the overall administration of the Air Force; that is, have you had to change your location of this mission versus that mission, have you had to have a lot or adjustment in any of those missions or plans?

General REILLY. No, sir; not adjustments due to this problem per se. However, this problem is certainly being recognized in the long-term force bed down and adjustments that are being made from time to time in terms of the long-range utilization of our bases and which bases we feel have the greatest long-term potential.

Mr. MCKAY. Something definitely needs to be done or continued in the greenbelt area because there are those who don't care; as long as they build their house and sell, the other guy has to worry about it.

In the meantime we have the problem and I would urge, Mr. Chairman, that they proceed with that with some alacrity before we create greater problems.

UTILIZATION OF PROPULSION POWER ALTITUDE FACILITY SPACE CHAMBER

Mr. PATTEN. What are the chances the propulsion power altitude facility space chamber will ever be used again?

General REILLY. Mr. Chairman, I presume you refer to the toxic altitude propulsion research facility which was approved by the Congress back in the 1960's sometime, 1965 or 1966, and which was completed not too many years ago. It is my understanding that the Systems Command does have some studies on this.

Is that correct, Colonel Stanton? There is some projected use?

Colonel STANTON. Sir; it is a national capability and the Air Force really doesn't have rolling space at the present time that would justify that specific use.

On the other hand, it is a national capability and in the future NASA might. I would have to really research the record to determine the exact answer, sir.

[The information follows:]

POTENTIAL USE OF PROPULSION POWER ALTITUDE FACILITY

The propulsion power altitude facility space chamber, a fiscal year 1964 MCP item, is a key part of the toxic altitude complex. The AF Rocket Propulsion Laboratory exploratory development testing efforts in the toxic altitude complex were deferred approximately 3 years ago in favor of higher priority efforts supporting chemical laser development in that complex. Altitude simulation capability was not required for chemical laser efforts and the space chamber was therefore not used. The rocket propulsion lab chemical laser efforts are almost completed, and the exploratory development efforts on toxic propellants that require use of the space chamber will be reinitiated in fiscal year 1974.

General REILLY. I had heard there was something new shaping up in 1975 or something for it now.

Mr. PATTEN. When was this $2.3 million facility constructed and how long has it been inactive?

General REILLY. Well, the construction was approved either in fiscal 1965 or 1966. It was not completed until just a few years ago. It has not been inactive very long. It wasn't fully capable until just in recent years.

Mr. PATTEN. Are there any questions on Edwards?

TRAILER RENTALS

Mr. NICHOLAS. Going back for a moment to the question of trailer rentals, the investigative staff's comment indicated the AFTC uses rental trailers at a cost of about $200 per month each for the purpose of meeting space requirements at various locations along the flight line and that the projected requirements for trailers are 90 in fiscal year 1974, 77 in fiscal year 1975, and 57 in fiscal year 1976.

What was the figure you used?

General REILLY. Mr. Nicholas, the figures I used were not that great. I must be in error. I was not aware of any projected increase in the use of trailers.

Mr. NICHOLAS. Could you reexamine this question of military construction versus the use of these trailers?

General REILLY. Yes, sir. I was not aware of any major increase in trailer use.

[The information follows:]

USE OF RENTAL TRAILERS BY AFTC

The trailer projections for fiscal years 1974, 1975, and 1976 were made 1½ years ago and were based on the maximum number of potential programs to be assigned to Edwards AFB. These projections have since changed and the only firm requirement at the present time is for 34 trailers in fiscal year 1974 and this requirement will be reduced to 12 trailers if an emergency construction project currently being submitted by AFSC is funded and constructed. No firm projections for trailer requirements in fiscal years 1975 and 1976 are available at this time.

LAURENCE G. HANSCOM FIELD, MASS.

Mr. PATTEN. We will skip Eglin for the moment.

Let us turn to Hanscom Field, Mass.

Please insert page 65 in the record.

[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		LAURENCE G. HANSCOM FIELD

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE SYSTEMS COMMAND	MXRD	MASSACHUSETTS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1942	MIDDLESEX	THREE MILES NORTHWEST OF WALTHAM, MASSACHUSETTS

11. MISSION OR MAJOR FUNCTIONS

MILITARY AIRLIFT WING (AIR FORCE RESERVE)

ELECTRONICS SYSTEMS DIVISION

AIR FORCE CAMBRIDGE RESEARCH LABORATORY

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
a. AS OF 31 December 72	820	996	3,188	0	0	63	46	0	5,113
b. PLANNED (End FY 76)	786	972	3,189	0	0	63	46	0	5,056

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	1,165	683	78,230	78,913
b. LEASES AND EASEMENTS	1,367	(18) 46	3,630	3,676
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				82,589
d. AUTHORIZATION NOT YET IN INVENTORY				0
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				480
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				5,000
g. GRAND TOTAL (c + d + e + f)				88,069

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
851-147	Add to and Alter Base Roads I		SY	20,400	480	20,400	480
	TOTAL				480		480

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LAURENCE G. HANSCOM FIELD

The last Systems Command base to be considered is Laurence G. Hanscom Field, located 3 miles northwest of Waltham, Mass. Base missions include support of Electronics Systems Division and Air Force Cambridge Research Laboratory. One item for $480,000 is requested for this base.

The one item provides for addition to and alteration of on-base roads. One of the existing major entry points must be closed because of national park development adjacent to the installation. Safe and efficient redistribution of base traffic necessitates construction of a properly designed road network.

AFSC—L. G. Hanscom Field, Mass.—Design information (design cost estimated)

Project: Add to and alter base roads:	
Design cost	$22,300
Percent complete, July 31, 1973	90

Mr. PATTEN. You are requesting $480,000 for roads, chiefly because the National Park Service bicentennial development will force you to close one gate. Were discussions held as to whether this gate area was the only place for the location of the proposed Minuteman Park? What other sites were considered?

I would like to see it on the map.

The Bicentennial Commission I think has had a change of heart about their park program for the bicentennial.

General REILLY. Yes, sir, and I think we have had a change of heart regarding this project.

Mr. Chairman, this outline shows in the dark black line the perimeter of L. G. Hanscom Air Force Base now with three principal gates serving the base, gates 1, 2, and 4. With the overlay we can see the general traffic flow into the principal areas of the base. The major flow is through gate 4, a lesser flow through gate Nos. 1 and 2 serving the various housing areas.

It is not a very smooth flow of traffic at the present time with a large column of the traffic passing through our community and housing areas.

Now with an overlay the circles represent congestion points in the present traffic flow.

With the Minuteman Park shaping up at the bottom in which gate No. 2 will be closed thereby diverting that traffic into the other gates. The buildup as indicated on the next sketch will add some 3,000 vehicles per day to gate 1 and almost 1,500 to gate No. 4. What is proposed, as shown in the blue, is a new direct routing through the base to move that traffic away from our populated areas and give us a smooth flow.

But I would like to bring out that the timing of the closing of that gate is quite uncertain at the present time. We feel that this project should be deferred until we have a more definite time for the requirement.

Mr. MCKAY. Are you proposing another exit or just widening of the existing one?

General REILLY. We are just proposing straightening out of the road inside as shown in the blue to accommodate the changed flow of traffic. But you are correct, Mr. Patten, things are uncertain at the moment.

UTILIZATION OF SPACE AT L. G. HANSCOMB

Mr. PATTEN. Provide a list for the record of how the space on this base is being used.

[The information follows:]

The Air Force Cambridge Research Laboratories (AFCRL) and the Electronic Systems Division (ESD) are the largest Air Force users of space and are the primary mission elements of Air Force Systems Command which are located in Hanscom Field.

ESD manages the development and acquisition of electronic command and control and communication systems. In the performance of that mission ESD occupies 15 buildings and uses 108,066 square feet of laboratory space and 227,573 square feet of administrative space.

AFCRL is the Air Force center for research in the environmental and physical sciences. In the performance of this research AFCRL occupies 31 buildings and uses 471,538 square feet of laboratory space and 19,708 square feet of administrative space.

In addition, Lincoln Laboratory is located in Government-owned facilities on Hanscom Field. Lincoln Laboratory is operated as a special laboratory by Massachusetts Institute of Technology, an educational institution, under an Air Force reimbursement. The mission of Lincoln Laboratory is to conduct a research and development program pertinent to national defense with particular emphasis on advanced electronics. In the performance of their mission Lincoln Laboratory occupies 13 buildings containing 588,388 square feet of space.

SPACE UTILIZATION BY LINCOLN LABORATORY AND MITRE CORP.

Mr. PATTEN. Can any functions now housed on base be consolidated with Lincoln Laboratory?

General REILLY. Colonel Stanton.

Colonel STANTON. Sir, Lincoln Laboratory is a Federal contract research facility and as such their resources are primarily controlled through the industrial resource funds and they are allocated the space that they need, and it is laboratory space peculiar to their electronic research needs and its compatibility with general use space on that base is not appropriate.

Mr. PATTEN. Can the space occupied off base by the Mitre Corp. be utilized more effectively by consolidating additional functions there?

Colonel STANTON. Again, this is a corporate entity. Again their resources are basically controlled by contract and there is, again, a Federal contract research facility. The mission is the technical support of the electronic systems division which acquires major electronic systems.

They again are provided basically the space required for their own utilization. They are not on Hanscom Air Force Base. They are located some 6 miles remote from the base and their address is Bedford, Mass.

Mr. PATTEN. Is there excess space available either at the Lincoln Lab or Mitre Corp.

Colonel STANTON. I don't have a complete position on the Mitre Corp. since they are a corporate entity and we can't infringe technically on their space. In terms of Lincoln Laboratory, my understanding is there is not unused space in Lincoln Laboratory, but I can check it.

Mr. PATTEN. So you are saying that Lincoln Laboratory is fully utilizing its laboratory space?

Colonel STANTON. That is my understanding. I have not personally been to the facility in a recent time frame.

Mr. PATTEN. Would you also provide the same information on whether the Mitre Corp. facilities are being utilized and just what changes in the contract and/or whatever would be required in order to allow the Air Force to use any portion of the space which is underutilized instead of requesting new space?

Colonel STANTON. Yes, sir.

[The information follows:]

UTILIZATION OF LINCOLN LABORATORY AND MITRE CORP. SPACE

The Mitre facility is owned by the Mitre Corp. and is located on corporate owned property approximately 6 miles from Hanscom Field, Mass. The Lincoln Laboratories are located at Hanscom Field, Mass., in Government-owned facilities. Both the Mitre and Lincoln facilities are presently being fully utilized.

There are no contractual arrangements relative to the location of Air Force personnel at Mitre. However, there is a gentleman's agreement which permits the location of Air Force personnel at the Mitre facility as determined necessary by the work requirement. Conversely, Mitre personnel are located at Air Force facilities in accordance with the program requirements. At Lincoln Laboratories, Air Force and Lincoln Laboratories personnel are collocated at Hanscom Field.

SATELLITE CONTROL FACILITIES

Mr. PATTEN. Turn to satellite control facilities.

Insert page 67 in the record.

[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		SATELLITE CONTROL FACILITIES

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE SYSTEMS COMMAND	N/A	VARIOUS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	N/A	N/A	N/A

11. MISSION OR MAJOR FUNCTIONS

SPACE SYSTEMS SUPPORT

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December ___									
b. PLANNED (End FY)									

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED				
b. LEASES AND EASEMENTS		( )		
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 ___				
d. AUTHORIZATION NOT YET IN INVENTORY				
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				
g. GRAND TOTAL (c + d + e + f)				

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
131-132	Satellite Communications Facility - Sunnyvale, California I		EA	1	192	1	192
214-425	Automotive Maintenance Facility - Kodiak, Alaska 44		SF	5,600	462	5,600	462
	TOTAL				654		654

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SATELLITE CONTROL FACILITIES—VARIOUS

The last two items to be considered in the Air Force Systems Command program support the satellite control facilities program in the United States. These facilities consist of tracking stations strategically located so that they can track, monitor, collect data, and provide input to satellites in equatorial and polar orbits. The program requested amounts to $654,000 and consists of two items at two locations.

The first item provides for construction of a foundation for support of a communications antenna at Sunnyvale, Calif. Installation of new antenna would provide the capability to accommodate increased volume and complexity of communications to and from military satellites.

Item No. 2 is for construction of a 5,600-square-foot automotive maintenance facility at Kodiak, Alaska. No adequate facilities exist for vehicle maintenance at this location. Large vehicles cannot be accommodated by existing structures requiring open-door maintenance in a harsh environment.

AFSC-SATELLITE CONTROL, VARIOUS-DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Satellite communications facility	$9,600	35
Automotive maintenance facility	21,700	45

Mr. PATTEN. Is the California control facility the main facility of this kind in the Air Force?

General REILLY. Yes, sir. This is the central hub or the main station in our worldwide satellite tracking network.

Mr. PATTEN. How will the satellite communications facility at Sunnyvale, Calif., improve Air Force satellite control?

General REILLY. Again, we may refer to a map.

The Sunnyvale facility is shown in the white circle and the other station represented the worldwide tracking system.

The project that we have before the committee this year is to support a move of the installation's new communications equipment into the central facility at Sunnyvale.

That, in essence, will provide an entire worldwide net with a control capability from the central station. At the present time as the satellites are in orbit, and the system is controlling some 65 of them, they can only be controlled through the individual stations as they are in their particular area. The central activity at Sunnyvale must issue instructions to the appropriate station which, in turn, must issue it to the satellite. The new communications system which will eventually tie the whole system together will permit the central activity at Sunnyvale to control at all times all satellites, thereby improving the effectiveness of the system and with major reductions in personnel requirements and associated costs.

AUTO MAINTENANCE FACILITY

Mr. PATTEN. You are requesting $462,000 for an auto maintenance facility at Kodiak, Alaska. Are you saying this work now must be done with the doors open?

Colonel RUTLAND. Mr. Chairman, large vehicles such as buses and snow-moving equipment are too long to go in the existing facility. Therefore when the maintenance work must be done on these vehicles the doors have to remain open.

Mr. PATTEN. Will they have to be earthquakeproof?

What are the ranges of temperature at this location?

Colonel RUTLAND. Mr. Chairman, the annual mean temperature is about 42 degrees, ranging from minus 12 to plus 85. The winds are from 60 to 80 miles per hour. The annual mean snowfall, 46 inches.

Mr. MCKAY. It is a little colder than some other parts of Alaska.

Mr. PATTEN. I think they are hit by the Japanese current.

Colonel RUTLAND. Yes, sir.

Mr. MCKAY. Up at Point Barrow they have the most severe cold problem?

General REILLY. The climate at Anchorage is not as severe as when you get over the Brooks Range.

Colonel RUTLAND. That is protected by the Chugach Mountain Range

Our extremes of temperature occur above the range. Fairbanks has a wide temperature variance from 60 below to 95 above.

Mr. PATTEN. What will you do with the existing facility?

Colonel RUTLAND. Maybe it will be returned to the contractor for other maintenance use. This is a composite facility now that has been used for different purposes.

Mr. PATTEN. Why is this proposed facility so costly? Is it a high-class garage?

Colonel RUTLAND. Essentially, yes, sir. The construction costs at Kodiak are approximately 2½ times greater than the Washington, D.C., area.

Mr. PATTEN. Was this to be a preengineered facility?

Colonel RUTLAND. Mr. Chairman, when we prepared the documentation for this project we did envision a preengineering facility as noted by the project document. During the initial design exploration, the Architect Engineer recommended that this was not the vehicle by which we should proceed. Primarily on the preengineering structure, there is a gabled roof and along one longitudinal side of this facility where the vehicles must enter, essentially one wall is comprised of the vehicle doors. It was felt that with the gabled roof along with the blowing snow and rain coming in the doors, the operation of those doors might be impeded. We decided on a sloped roof away from the doors. What they will have then is not preengineered construction but rather a steel frame structure, bar joist, built-up roof sloping away from the doors.

Mr. PATTEN. Is this going to cost more or less?

Colonel RUTLAND. Our reports from the Architect Engineer thus far indicate comparable costs with what we estimated before. As I mentioned yesterday, we used, generally speaking, 85 percent of the conventional construction costs. When we go to a preengineered facility, depending on the location, the climatic conditions, transportation, and additional interior accommodations, it may well offset that 15-percent reduction.

Mr. PATTEN. Would you apply the area cost factor to a preengineering facility? You are going to bring it in?

Colonel RUTLAND. Yes, sir. As I mentioned, Mr. Chairman, we do use 85 percent of the conventional construction for programing purposes when we estimate preengineered structures. Then there is transportation involved in getting it there and the labor involved in erecting it. In Alaska, were we to go to the preengineered structure, we

would have a considerable expense involved laborwise in insulating the structure. Heavy snow loads may also require strengthening of the structure.

Mr. PATTEN. You say it will be earthquakeproof?

Colonel RUTLAND. To an extent, sir. Normal design considerations for seismic zone 4 will be used.

Mr. PATTEN. We stopped off and saw the effects of the big quake they had 4 or 5 years ago. It did a lot of damage and they were waiting for the other shoe to drop, from what they told us. They feel there is more to come.

General REILLY. We were hit very hard at Elmendorf and had severe damage there.

PIPELINE

Mr. PATTEN. Did you ever get that oil line in?

General REILLY. No, they have done away with that. We had a pipeline into Eielson Air Force Base, which is the other base to the north. That is being done away with—the Haines pipeline. We have not had a pipeline into Elmendorf.

Mr. PATTEN. I thought you tried to get a pipeline from one of the airfields to overcome the lack of shipping in cold weather.

General REILLY. We have increased our storage at Eielson to compensate for the loss of that pipeline.

AIR TRAINING COMMAND

Mr. PATTEN. Turn to Air Training Command and insert in the record page 70.

[The information follows:]

DEPARTMENT OF THE AIR FORCE MILITARY CONSTRUCTION PROGRAM—FISCAL YEAR 1974

Air Training Command

Installation	*Proposed program (in thousands)*
Keesler Air Force Base, Miss	$8,786
Lackland Air Force Base, Tex	6,509
Laughlin Air Force Base, Tex	4,635
Lowry Air Force Base, Colo	21,610
Mather Air Force Base, Calif	1,993
Randolph Air Force Base, Tex	1,463
Reese Air Force Base, Tex	4,211
Sheppard Air Force Base, Tex	2,753
Vance Air Force Base, Okla	371
Webb Air Force Base, Tex	3,154
Williams Air Force Base, Ariz	797
Total	56,282

AIR TRAINING COMMAND

The mission of the Air Training Command is to provide flying training leading to an aeronautical rating; aircrew training; basic and advanced technical training leading to an Air Force specialty; basic military training; mobile training; and such other training as may be directed by the Chief of Staff, U.S. Air Force.

Construction projects totaling $56,282,000 are requested by this program for 11 bases where Air Training Command is host. Of the total $35,932,000 supports the Air Training Command mission with the remainder, $20,350,000, for the Air Force Accounting and Finance Center at Lowry Air Force Base, Colo.

UNDERGRADUATE PILOT TRAINING WORKLOAD

Mr. PATTEN. Last year we included in the record on pages 95 and 96 the undergraduate pilot training workload and other training workloads by base. We also included, on page 165, the capacity of pilot training bases and technical training centers in the Air Force inventory. At that time you projected a pilot training rate of 3,665 for fiscal years 1973 through 1977. What is your pilot training rate for 1973, and what is projected for fiscal years 1974 through 1978? Provide details for the record, by base.

[The information follows:]

PAST AND PROJECTED PILOT TRAINING RATES, BY BASE

Past and projected training rates for each undergraduate pilot training (UPT) base follows:

UPT PROGRAMED PRODUCTION

	Fiscal year—					
	1973	1974	1975	1976	1977	1978
Moody	372	358	392	395	371	371
Laughlin	376	403	407	410	400	400
Reese	384	396	406	406	395	395
Columbus	349	350	414	415	400	400
Craig	320	295	337	340	310	310
Laredo	402	93	0	0	0	0
Vance	365	362	372	400	390	390
Webb	379	363	352	352	373	373
Williams	499	441	495	498	490	490
Sheppard[1]	87	86	35	(2)	(2)	(2)
Total	3,533	3,147	3,210	3,216	3,129	3,129

[1] Indicates USAF graduates only.
[2] USAF inputs to the German UPT program have not been programed.

Mr. PATTEN. What about the projected rate?

General REILLY. In fiscal year 1973, production of 3,533 and fiscal year 1974, 3,147; 1975, 3,201; 1976, 3,216; 1977 and 1978, 3,129. These are the USAF graduates only. They do not include the German undergraduate trainees.

Mr. PATTEN. Is that comparable to the 3,665 that you estimated last year?

General REILLY. Yes, sir. Our closure of Laredo and adjustment at other undergraduate pilot training bases had had some effect on that.

CLOSURE OF LAREDO AIR FORCE BASE

Mr. PATTEN. You are proposing to close Laredo Air Force Base for which the Air Force requested both military construction and family housing projects in fiscal year 1973. Did you know at the time you were testifying that there was a possibility that you would close a pilot training base and that Laredo was the weakest base in the inventory? Was it the weakest base in the inventory?

General REILLY. I certainly did not, Mr. Chairman.

Mr. PATTEN. Was it the weakest base?

General REILLY. Actually we are not able to identify the weakest base. At that time we thought we were going to have nine undergraduate pilot training bases and now the decision has been made to reduce to eight.

Mr. PATTEN. What will be done with Laredo?

General REILLY. I think the plans are, from an Air Force standpoint, to excess the facilities and the base as quickly as possible. I presume the city will probably acquire the major portion of the base.

Mr. RIETMAN. The city has shown some interest in acquiring the major portion or the full base and developing it under their sponsorship.

CAPACITY OF UNDERGRADUATE PILOT TRAINING BASES

Mr. PATTEN. The figures on capacity of pilot training bases supplied last year indicated that with nine bases you had the maximum capacity to train 4,286 students annually. Subtracting Laredo, this figure would become 3,797. Does that sound reasonable?

General REILLY. Colonel Ballif, would you address that one, please.

Colonel BALLIF. Yes, that is compatible with the planning figures that we have, sir.

Mr. PATTEN. Is there a possibility that your pilot training rate could be further reduced or that you might choose to make further consolidations of your training installations due to fiscal limitations?

Colonel BALLIF. There are no plans at this time to reduce the pilot training capability of the training complex, sir.

Mr. PATTEN. You say there are no plans, but is there a possibility?

Colonel REED. The pilot training rate really is a function of the force levels—I keep going back to the forces because the training system provides the personnel to man the forces, so if the force levels were reduced, which are beyond my capability to project at this time due to budget constraints, then the pilot training rate would reduce.

Under those conditions we would have to evaluate the eight residual bases and see if that reduction could be accommodated best by a pro rata reduction across the board to protect some flexibility within the system in case those rates went up again in the future, or whether it would be wise to close the base. We try to retain production around 92 percent of the total capacity of the base structure. If the reduction in pilot training was 100 or 200 overall in a year, we probably couldn't close another base. If there was a large reduction it perhaps would be possible. Again, the assumptions we could exercise would be innumerable and it would not be beneficial at this time to try to identify such bases as we might close.

AVOIDANCE OF CONSTRUCTION AT WEAK BASES

Mr. PATTEN. In that event, how do you rate the various pilot training bases according to the base utilization criteria which the Air Force has developed?

The general said you have no weakest base?

Colonel REED. Yes, sir. All the pilot training bases provide a basic function and do it in an efficient manner. That is, producing pilots. We need all of them to meet the current strengths. Therefore, there is no weakest base.

Mr. NICHOLAS. This is similar to the testimony last year. Since there was a possibility that a further reduction in pilot training, which was not anticipated last year could occur and did, and since you did program Air Force facilities at Laredo, what steps are you taking to make sure you are not requesting facilities at bases which may not be fully utilized or which will be closed? If you cannot identify, according to your criteria, bases which are more apt to be closed as opposed to

other bases, how can you be sure you are not putting your money on bases which will be closed next year?

General REILLY. Mr. Nicholas, to the best of our ability and not knowing what may come in the future, but based upon what we know today and our best analysis of what lies ahead, we feel that eight undergraduate pilot training bases will be required.

Mr. NICHOLAS. You thought nine would be required last year?

General REILLY. That is true.

Mr. NICHOLAS. Had this committee known only eight would be required last year it might have discovered that the facilities at Laredo were not required.

General REILLY. We had 10 at one time. Randolph went out of the picture.

Mr. PATTEN. I thought one year we counted 11. It may have been that.

Colonel REED. You may have counted 11 if you considered Shepherd, which is a German production facility primarily.

Mr. NICHOLAS. Given the fact that you have utilized criteria through the years to look at these bases, and given the fact that it is possible there might be further reductions, I am not trying to embarrass the Air Force or hassle you about this, but are you able to apply these criteria to identify bases which seem weaker?

If you are able to do that, are you willing to say which do less well or better according to your criteria, and would you be willing to share that knowledge with the committee in some way which would allow the members to make some reasonable decision as to the need for the facilities you are requesting?

Colonel REED. There was an extensive study done of the undergraduate Pilot Training base structure. We did gather data in various areas on each base. It is not possible when you take this data to either assign numerical numbers and come up with a base that has 100 points and one with 40 points. There are within the structure certain bases that have weaker elements in certain areas than others.

For example, at one base, Williams' weather is predominantly better than all other bases. There are two bases that have weather that is somewhat poorer than the others Craig and Columbus, because of their geographic location. There are certain bases that have somewhat better facilities than others. In the case of Laredo, if the facilities had been constructed that we requested in 1973 and the base had been in a posture where there might not have been a family housing deficit because we had constructed the housing, perhaps the decision would have swung in a different direction. That construction was a cost avoidance since we had not started it when the requirement went down. There are many factors in isolation you can pick on and say, "This one has the poorest facilities, therefore it should be the next closed." For example you might consider the fact that a place like Moody has the largest unrestricted airspace in the Southeast and that is a valuable asset in itself. That air space factor opposed to the fact it has only two parallel runways as compared to three may be a critical factor for retaining Moody. It is difficult to sit down and say when we reviewed all of these factors we can now range the bases 1 through 8. Please notice that we have not gone heavily on construction in UPT bases. We have made a prudent request for only those facilities that we absolutely need.

We are cognizant that we should try to minimize our construction because there is a possibility we may have to make another hard decision on the base to close. I am just not in a position at this time to identify which of these eight residual bases will be the next one closed.

TECHNICAL TRAINING CENTERS CAPACITY AND UTILIZATION

Mr. PATTEN. Is the Air Force's technical training workload increasing or decreasing? How does your projected workload compare to capacity?

Colonel BALLIF. It is relatively stable over the next few years. The program figures that we have, which I will provide for the record, indicate our figures run from an average of 240,000 in fiscal year 1973 to a high of 257,000 in 1978. Approximately an average of about 250,000.

Mr. PATTEN. How does your projected workload compare to capacity at these bases?

Colonel BALLIF. The capacity of our technical training facilites is based on the two problems of housing and messing facilities. The capacity of our training complex can be increased by adding shifts. We have a standard 2-shift operation for training now, 12 hours a day utilization of the facilities. By adding a third and going to 18 hours a day utilization on the training facilities, we could add approximately 30 percent to our training load. However, the big problem, the pacing problem is the availability of housing and messing facilities.

Mr. PATTEN. Provide your technical training workload projections by base for the record. Also indicate, for comparison, the maximum capacity of each base.

[The information follows:]

TECHNICAL TRAINING WORKLOAD PROJECTIONS BY BASE[1]

[Projected training workload and maximum capacity at each technical training center]

Training center	Fiscal year—				
	1974	1975	1976	1977	1978
Chanute	5,755	6,598	6,753	6,753	6,753
Keesler	8,530	9,781	10,008	10,008	10,008
Lowry	5,445	6,245	6,389	6,389	6,389
Sheppard	7,627	8,745	8,951	8,951	8,951
Lackland	13,798	17,533	18,002	18,002	18,002
Total	41,155	48,902	50,103	50,103	50,103

[1] Loads include active duty, Air Force Reserves, Army, Navy, other Government agency, Air Force civilians and foreign students. These loads also include officer and civilian students who may be housed off-base. When airman on-base housing requirements exceed the stated dormitory capacity, additional students are assigned to existing dormitories on a temporary basis.

MAXIMUM CAPACITY[1]

	Airman	Officer	Total
Chanute	6,082	166	6,248
Keesler	9,162	343	9,505
Lowry	5,304	249	5,533
Sheppard	8,309	705	9,014
Lackland	22,588	74	22,662
Total			52,962

[1] In those instances where student loads exceed housing capabilities Air Training Command contracts for off-base quarters or overcrowds existing facilities, and/or a combination of both.

KEESLER AIR FORCE BASE, MISS.

Mr. PATTEN. Turn to Keesler Air Force Base, Miss.
Insert page 71 in the record.
[The information follows:]

1. DATE	2. DEPARTMENT	FY 19 74 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		KEESLER AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	MAHG	MISSISSIPPI

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1941	HARRISON	ONE MILE WEST OF BILOXI, MISSISSIPPI

11. MISSION OR MAJOR FUNCTIONS

TECHNICAL TRAINING CENTER

ELECTRONIC INSTALLATION GROUP (AIR FORCE COMMUNICATIONS SERVICE)

TACTICAL AIRLIFT GROUP (RESERVE)

AERIAL CARTOGRAPHIC/GEODETIC SQUADRON

WEATHER RECONNAISSANCE SQUADRON

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	827	5,797	3,041	734	9,841	79	65	0	20,384
b. PLANNED (End FY 76)	827	5,797	2,999	734	9,841	79	65	0	20,342

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	3,483	776	126,092	126,868
b. LEASES AND EASEMENTS	227	(1) 0)	118	118
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				[illegible]
d. AUTHORIZATION NOT YET IN INVENTORY				[illegible]
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				8,786
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				33,000
g. GRAND TOTAL (c + d + e + f)				174,099

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
113-321	Alter Aircraft Operational Apron I		SY	130.000	865	130,000	865
211-111	Add to and Alter Maintenance Hangars I		LS	LS	1,125	LS	1,125
540-243	Dental Clinic I		SF	25,900	1,666	25,900	1,666
722-211	Composite Airmen Dormitory I		MN	1,000	5,130	1,000	5,130
	TOTAL				8,786		8,786

Priority

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KEESLER AIR FORCE BASE

The first base is Keesler Air Force Base, located 1 mile west of Biloxi, Miss. This base supports a technical training center; an electronic installation group under control of the Air Force Communications Service; a tactical airlift group (Reserve); an aerial cartographic/geodetic squadron; and a weather reconnaissance squadron. The program requests $8,786,000 for the following four items:

The first item is to alter aircraft operational apron to accommodate a newly assigned heavier aircraft. The existing aircraft apron is extensively cracked, spalled, and generally deteriorated creating a hazard to aircraft, and associated equipment. This project will provide adequate paved surfaces.

The second item is to add to and alter maintenance hangars to provide two covered maintenance spaces and one combined corrosion control/fuel cell space. Existing hangars will not accommodate the newly assigned large aircraft.

The third item provides for addition to and alteration of the existing dental clinic. Dental services are performed in three widely dispersed clinics with approximately one-half the space required to provide an effective dental program.

The fourth project will construct a 1,000-man composite airmen dormitory. Approximately 25 percent of the airmen assigned are housed in substandard, 30-year-old, structures designed for less than a 10-year service life. This project will provide adequate quarters for nearly all assigned airmen now in unsuitable housing. It will also result in disposal of 37 antiquated buildings.

ATC-KEESLER AFB, MISS.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Alter aircraft operational apron	$45,000	15
Add to and alter maintenance hangars	56,020	10
Dental clinic	106,000	45
Composite airmen domintory	60,000	85

Requirements, assets, and deficiencies for bachelor airmen at this location are:

	Men
Requirement	10,118
Existing substandard	[1] (2,986)
Existing adequate	7,556
Authorized not in inventory	-------
Community support adequate	232
Total adequate	7,738
Deficiency	2,330
This request	1,000

[1] None upgradable.

Note: Design status on requirement as of May 1, 1973, 15 percent, estimated completion September 1973.

CALCULATION OF STUDENT POPULATION

Mr. PATTEN. I note that the projected student population at Keesler appears to have increased over that shown last year, from 8,200 to 9,841 shown here. Would you discuss changes in your techniques of calculating student population? Is this new method more realistic?

Colonel BALLIF. There has been no actual increase in the student load at Keesler. It represents a change in defining our requirements. Our requirements in the past have been based on the document called trained personnel requirements, which is based on the force structure and the various skills required to accomplish the mission of the Air Force. Often there are significant differences in the workload over a short period of time which cause this to inaccurately reflect changes

in training requirements, whereas in reality, in peacetime, technical training loads have remained relatively stable over a 5-year period.

In order to compensate for this we developed some long-range population figures which took into consideration the annual housing survey data concerning our bachelor and married personnel, a past 3-year history at each one of our training centers for student load, and the predicted student loads over the future 3-year period. In addition, in order to compensate for certain other factors, such as vacancies, fluctuations in recruitment, eliminations, and washbacks, and so forth, we added a factor of approximately 15 percent. By this means we developed the planning figures which you have in the documentation this year.

RELOCATIONS TO KEESLER

Mr. PATTEN. Can you indicate on the map where the apron and maintenance hangars you are proposing to upgrade are located?

General REILLY. We don't have a large map of that.

Mr. PATTEN. In what way are these two projects brought about by the relocation of functions to Keesler? Was Keesler the best location for these functions? Why?

General REILLY. Mr. Chairman, the requirement centers around the introduction of the C–130 transport aircraft into Keesler. The pavements were designed for light duty, small aircraft, and cargo aircraft associated with Reserve activity. The geodetic and weather activity requires heavy-duty pavements.

Mr. PATTEN. Was Keesler the best location for these functions?

Colonel REED. Yes, sir.

Mr. PATTEN. Why?

Colonel REED. There was a drawdown of activities in flying at Keesler, with the termination of the foreign pilot training, and facilities such as the fabrication and support shops, and so forth, became available. In addition, we had a C–130 mission already established and Congress in the last year's program approved funds for the extension of the runway. Consequently we had potential at the base which could be utilized with the expenditures for upgrading that you see reflected in this program.

Mr. PATTEN. Are these two projects urgent?

Colonel REED. Yes, sir.

Mr. PATTEN. Will they complete the requirement for this mission?

General REILLY. Yes, sir, for pavements they will.

Mr. PATTEN. For hangars also.

General REILLY. Yes, sir. Both apron and hangar maintenance.

DENTAL CLINIC

Mr. PATTEN. What is the situation on dental clinic chairs at Keesler? How many of the present chairs are in permanent facilities?

Colonel BAIRD. Mr. Chairman, we presently have three dental clinics at Keesler Air Force Base. One built in 1963, which has 20 dental chairs. One built in 1941 with 6 dental chairs, and one built in 1953 with 16 dental chairs. We now have a requirement to have a total of 78 dental treatment rooms at this base. We have seven in the hospital. We need to expand the separate dental clinic to a capacity of 71 dental chairs.

Mr. PATTEN. How many of the present chairs are in permanent facilities?

Colonel BAIRD. Twenty-seven of them, sir. Twenty in the separate dental clinic and seven in the main hospital building.

Mr. PATTEN. Could the dental chairs be accommodated in the hospital?

Colonel BAIRD. No; the hospital is presently overcrowded in providing medical care. It has expanded its operations in these eight wooden temporary buildings to provide medical care. There is not capacity in that structure to put another dental clinic or enlarge dental services.

LACKLAND AFB, TEX.

Mr. PATTEN. If there are no questions, turn to Lackland Air Force Base, Tex.

[No response.]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		LACKLAND AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	MPLS	TEXAS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1941	BEXAR	EIGHT MILES SOUTHWEST OF SAN ANTONIO, TEXAS

11. MISSION OR MAJOR FUNCTIONS

BASIC MILITARY TRAINING CENTER
WILFORD HALL HOSPITAL

AIR FORCE SPECIAL TREATMENT CENTER

SCHOOL OF APPLIED AEROSPACE SCIENCE

SCHOOL OF MILITARY SCIENCE - AIRMEN

SCHOOL OF MILITARY SCIENCE - OFFICER

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	1,316	6,215	2,597	564	17,341	106	146	0	28,285
b. PLANNED (End FY 76)	1,316	6,215	2,598	564	17,341	106	146	0	28,286

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	6,787	1,280	156,365	157,645
b. LEASES AND EASEMENTS	41	1	0	1
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				157,646
d. AUTHORIZATION NOT YET IN INVENTORY				3,769
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				6,509
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				33,000
g. GRAND TOTAL (c + d + e + f)				200,924

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE Priority b	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
550-143	Dispensary I		SF	11,400	450	11,400	450
722-211	Composite Recruit Training Housing Facility I		MN	1,000	5,053	1,000	5,053
723-351	Alter and Air Condition Airmen Dining Halls I		LS	LS	1,006	LS	1,006
	TOTAL				6,509		6,509

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LACKLAND AIR FORCE BASE

The next base to be considered in the Air Training Command's program is Lackland Air Force Base, located 8 miles southwest of San Antonio, Tex. Missions supported include a Basic Military Training Center, Wilford Hall Hospital, Air Force Special Treatment Center, School of Applied Aerospace Science, and School of Military Science (airmen/officer). The program requested here is for $6,509,000 for the following three items:

The first project will provide alteration of an existing dining hall, 11,400 square feet, to provide a dispensary. The present facility consists of a small first-aid station in a headquarters building. Inadequate space, poor configuration, no dental treatment rooms, and increased patient loads contribute to degraded medical service.

The second item will provide a 1,000 MN composite living quarters; 30 percent of the assigned airmen are housed in substandard quarters, 20- to 30-year-old structures, designed for less than 10-year service life, have inadequate lighting, environmental control, and other creature comforts considered minimum by present standards.

The last project provides air-conditioning and other alterations to three airmen dining halls. Dining halls are hot, noisy, and uncomfortable with an interior arrangement, lighting, and decor that are inferior to commercial dining facility standards.

ATC-LACKLAND AFB, TEX.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Dispensary	$37,000	55
Composite recruit training housing facility	200,000	95
Alter and air-condition airmen dining halls	36,000	65

Enlisted barracks summary, Lackland AFB, Tex.

	Men/Women[1]
Total requirement	20,895
Existing substandard	[2] (8,945)
Existing adequate	[3] 14,715
Funded, not in inventory	-------
Adequate assets	14,715
Deficiency	6,180
Fiscal year 1974 program	1,000
Barracks spaces occupied (average) Mar. 31, 1973	15,627

[1] Recruits 72 ft² per man.
[2] None upgradable.
[3] Includes 123 personnel in private housing.

Mr. PATTEN. I notice you have changed the names of your schools here. Why is that?

Colonel BALLIF. This is part of a continuing program within the Air Force to make the titles of the schools more compatible with the educational activities in the civilian community. This is an attempt to gain recognition by the civilian education community for the courses which are being taught by the Air Force. Rather than calling an organization the 3535th Technical Training School, which means nothing in the civilian community, we define it as the school of military science—airman or the school of applied military science—Lackland, or for officer schools, the school of military officers, which was formerly OTS, officer training schools.

Mr. PATTEN. That is the best you could come up with? I am a nut on nomenclature and names for schools. We opened five schools in one day and every one was named after an astronaut. All easy names and no letters. None of that William H. Anders, III. They are all short names.

DISPENSARY

You are requesting a dispensary at the Medina annex. Where is this, and why is a new dispensary necessary in view of all the medical facilities in San Antonio?

Colonel BAIRD. Mr. Chairman, this proposed medical facility will be constructed by altering an available dining hall which is not necessary for use as a dining facility at this time. The facility is needed because the current medical facility at Lackland Medina training annex is not adequate to take care of the personnel there. The facility now is a small 2,000-square-foot appendage to the end of the headquarters building, consisting of one treatment room and one doctor's office, a waiting room, and hallway. At the present time the patients coming there have to get some of their examinations and immunizations in the hallway because there is not enough space in the main structure. We feel it is important to have a medical facility at Medina to reduce student and faculty traveltime now consumed when they go to other medical facilities in San Antonio.

RECRUIT DORMITORY COMPLEX

Mr. PATTEN. Has the Air Force had any difficulty recruiting since the termination of the draft?

Colonel BAIRD. No, sir. We have not at the present time.

Mr. PATTEN. What will be your remaining deficit for recruit housing after the completion of the composite recruit training housing facility in this year's program?

Colonel SHOOK. Approximately 3,500 spaces.

Mr. PATTEN. Can you provide for the record the costs of similar recruit facilities in previous military construction programs and show what estimate for this facility you would derive by applying cost escalation and the cost factor in this area to this project.

General REILLY. Yes, sir.

[The information follows:]

COST COMPARISON OF LACKLAND RECRUIT TRAINING FACILITY WITH PRIOR FACILITIES

Two recruit training facilities, approved in the fiscal year 1970 MCP, were constructed at Lackland Air Force Base. The following figures show our unit cost experience for these facilities escalated to April 1, 1974. These are aggregate amounts which include dormitory, dining facilities, and administrative space costs.

Program year	Programed amount (thousands)	Construction cost (thousands)	ENR escalation from award month to Apr. 1, 1974 (percent)	Area cost factor	Adjusted unit cost to Apr. 1, 1974
1970	$7,789	$8,604	42.2	0.95	31.35
1974	5,053			.93	29.15

AIR-CONDITION AIRMEN DINING HALLS

Mr. PATTEN. Indicate what portion of the airmen dining hall will be air-conditioned.

General REILLY. Mr. Chairman, the dining area or the eating area is the only area that will be air-conditioned. The kitchen area will be cooled with forced ventilation.

Mr. NICHOLAS. Is this also true of the facilities that were provided last year? That was for air-conditioning of dining hall facilities?

General REILLY. Yes, sir.

Mr. PATTEN. There are reasons for that?

General REILLY. Yes, sir. Good reasons. Where the people eat is an area that needs comfort cooling the most. There are certain areas within the kitchen itself which need some environmental control. We don't want to go to mechanical air-conditioning to do that.

LAUGHLIN AIR FORCE BASE, TEX.

Mr. DAVIS. We will take up next Laughlin Air Force Base and insert page 78 in the record.

[The information follows:]

LAUGHLIN AIR FORCE BACE

The next base for consideration is Laughlin Air Force Base, sited 7 miles east of Del Rio, Tex., where the primary mission is the undergraduate pilot training school. The requested program at this base amounts to $4,635,000 for construction of a composite medical facility. Medical needs of the military community exceed the capability of existing facilities. Five individual structures now house the medical function. These are combustible frame structures that are professionally obsolete and functionally inadequate.

ATC-Laughlin AFB, Tex.—Design information (design cost estimated)

Project—Composite medical facility	
Design cost	$288,400
Percent complete, July 31, 1973	80

1. DATE	2. DEPARTMENT	FY 19 74 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		LAUGHLIN AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	MXDP	TEXAS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1942/1952	VALVERDE	SEVEN MILES EAST OF DEL RIO, TEXAS

11. MISSION OR MAJOR FUNCTIONS

UNDERGRADUATE PILOT TRAINING SCHOOL

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	397	1,549	632	342	0	10	15	0	2,945
b. PLANNED (End FY 76)	385	1,554	632	335	0	10	15	0	2,931

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	3,925	107	38,042	38,149
b. LEASES AND EASEMENTS	572 (40)	8	26	34
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				38,183
d. AUTHORIZATION NOT YET IN INVENTORY				711
e. AUTHORIZATION REQUESTED IN THIS PROGRAM (Excludes $195,000 Mobile Home Spaces)				4,635
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				5,700
g. GRAND TOTAL (c + d + e + f)				49,229

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
510-001	Composite Medical Facility I		SF	78,200	4,635	78,200	4,635
	TOTAL				4,635		4,635

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Mr. DAVIS. I don't suppose I dare ask how you rate Laughlin in the light of your recital that all of these bases were all equally good. Do you have a reading for that base on the basis of your criteria?

General REILLY. One of the strong pilot undergraduate training bases.

Mr. NICHOLAS. Does that mean there are some weak ones?

General REILLY. No, one of the eight strong ones.

Mr. DAVIS. You do have some general criteria that you use for rating these?

General REILLY. Yes, sir. I think in your absence Colonel Reed mentioned each of the bases has its strong points and weak points. It is very difficult on any kind of a numerical rating to say overall that one is much better than the other.

Mr. DAVIS. Is Laughlin particularly strong in some areas and not so strong in others? How would you rate that?

Colonel REED. Laughlin is a very good base. It is located in an area where we do not have airspace problems and its airspace is located outside of the area where we get transcontinental or international traffic travel from the United States to Mexico. Laredo, which was also a border base, had a great deal of air traffic that went on the particular airway through its airspace and it caused difficulty.

Mr. SIKES. Still you are on the Mexican border. Why is there a difference in the two?

Colonel REED. Laughlin is farther back from the border and not constrained by the Rio Grande River. The development in the area has not enveloped the base, nor does it constrain flight patterns to the base. In Laredo, we have abnormal traffic patterns where we had to superimpose the T–37 and T–38 patterns over each other. We could not make a normal pattern to the east because of the border proximity. When I say border base, I mean that it is a factor of proximity to the United States-Mexico border. At Laughlin, the specific geographic situation is quite different. It also has no threat of ground encroachment.

Mr. NICHOLAS. How are the facilities at Laughlin?

Colonel REED. They are better than many of our other undergraduate pilot training installations. We have a lot of old facilities at some of these bases that were built back in World War II days. Laughlin has fair facilities. I would like to make one point. The criteria were designed to be used in evaluating the bases in the light of mission changes or what we would do if a given mission was changing. We don't apply these criteria on a routine basis and numerically try to rate the bases. It becomes a matter of judgment in many cases as to the composite total of all of these factors.

COMPOSITE MEDICAL FACILITY

Mr. DAVIS. At Laughlin your existing medical facility was built less than 20 years ago. Is that right?

General REILLY. 1955.

Mr. DAVIS. What kind of construction is it?

Colonel BAIRD. It is a semipermanent structure. It is a concrete foundation and has hardwood floors, asbestos siding.

General REILLY. Korean war vintage.

Colonel BAIRD. Yes, sir. It was damaged in one hurricane and we would like to see it replaced with a permanent facility. That is one of the reasons we would like to see it replaced.

Mr. DAVIS. How does the capacity of it compare with what we are talking about here?

Colonel BAIRD. The current facility is a structure of 46,000 square feet and has 50 beds. We found it is not necessary in this location to operate that many beds. We are operating a 25-bed hospital. With the projected loads for the area we feel we should replace the hospital with a 30-bed composite medical facility with 10 dental treatment rooms. It is a basic UPT base medical facility. I might add Laughlin is located in a remote part of the State. A local civilian hospital has been denied accreditation by the Joint Commission on Accreditation of Hospitals, so military personnel and their families have no accredited hospital to go to except Laughlin or drive several hours to San Antonio.

Mr. DAVIS. CHAMPUS does not mean too much to these people?

Colonel BAIRD. That is very true.

Mr. DAVIS. What about the existing facilities? Are there any plans for their use or will they be demolished?

General REILLY. We intend to dispose of them in their entirety?

Colonel BAIRD. Yes, sir; all five structures.

Mr. DAVIS. Would you provide the past and projected inpatient and outpatient workload for this hospital for the record?

[The information follows:]

PAST AND PROJECTED WORKLOADS FOR USAF HOSPITAL, LAUGHLIN

Calendar year	Average daily patient load	Outpatient visits	Calendar year	Average daily patient load	Outpatient visits
Past:			Projected:		
1968	13.7	43,886	1973	15.0	54,000
1969	12.2	52,968	1974	15.0	54,000
1970	14.3	49,913	1975	15.0	54,000
1971	15.7	54,019	1976	18.0	58,000
1972	14.0	53,357	1977	20.0	60,000

Mr. DAVIS. It is indicated that you have an average occupancy of between 18 and 19 beds out of a 30-bed facility. Is that about par for the course?

Colonel BAIRD. Yes, sir. We computed our requirement by using occupancy rate or average daily patient load, and we are permitted to add a dispersion factor. This is because differences in diseases occur whereby we cannot put patients with infectious disease in a 2-bed room together. We also cannot put people of different sexes in the same 2-bed room, and therefore we lose beds through these patient management procedures. Using this, and with our experience with retired personnel, we are authorized to program two beds for them in this facility. It comes out to 26 beds rounded off to a 30-bed hospital.

Mr. DAVIS. Apparently there has been a constantly rising outpatient load here. Do your projections indicate that that will continue to be the situation?

Colonel BAIRD. Yes, sir, they do.

EGLIN AIR FORCE BASE, FLA.

Mr. SIKES. Eglin Air Force Base. Place page 57 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		EGLIN AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR FORCE SYSTEMS COMMAND	FTFA/FTEV	FLORIDA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1953	OKALOSSA, WALTON, SANTA ROSA	SIX MILES NORTHEAST OF FORT WALTON BEACH, FLORIDA, FORTY MILES EAST OF PENSACOLA, FLORIDA

11. MISSION OR MAJOR FUNCTIONS

TACTICAL FIGHTER WING (TACTICAL AIR COMMAND)

AEROSPACE RESCUE AND RECOVERY WING (MILITARY AIRLIFT COMMAND)

SPECIAL OPERATIONS WING (TACTICAL AIR COMMAND)

AEROSPACE DEFENSE SQUADRON (AEROSPACE DEFENSE COMMAND)

ARMAMENT DEVELOPMENT TEST CENTER

AIR FORCE ARMAMENT LABORATORY

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	2,008	9,227	3,713	703	558	110	200	0	16,519
b. PLANNED (End FY 76)	2,087	10,244	3,621	703	558	110	200	0	17,523

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	464,162	1,738	222,993	224,731
b. LEASES AND EASEMENTS	346 (k 3)	6	0	6
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				224,737
d. AUTHORIZATION NOT YET IN INVENTORY		(Excludes $334,000 Mobile Home Spaces)		12,415
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		(Excludes $6,360,000 Family Housing)		7,039
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				18,200
g. GRAND TOTAL (c + d + e + f)				262,391

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
211-157	Aircraft Engine Shop 19		SF	37,800	985	37,800	985
211-159	Aircraft Corrosion Control Facility - Auxiliary 9 I	TAC	LS	LS	138	LS	138
310-222	Armament Ballistics Test Facility I		LS	LS	232	LS	232
390-485	Data Collection Theodolite Stations 43		LS	LS	237	LS	237
610-249	Armament Development Test Center Management Facility. I		SF	146,000	4,000	146,000	4,000
740-612	Airmen Open Mess I		SF	16,000	730	16,000	730
740-617	Addition to NCO Open Mess - Auxiliary 9 I	TAC	SF	17,350	717	17,350	717
	TOTAL				7,039		7,039

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EGLIN AIR FORCE BASE

The next base to be considered is Eglin Air Force Base, located 6 miles northeast of Fort Walton Beach, Fla., and includes auxiliary No. 9 airfield of the Eglin complex. The mission of Eglin main base is in support of a tactical air command tactical fighter wing; Military Airlift Command aerospace rescue and recovery wing; an armament development test center, and the Air Force's armament laboratory. At auxiliary No. 9 there is a special operations force under the jurisdiction of the Tactical Air Command and an Aerospace Defense Command aerospace defense squadron. The program requested for these two locations amounts to $7,039,000 and consists of seven items. The two items on Eglin No. 9 are in support of the Tactical Air Command.

The first is for an aircraft engine shop with a scope of 37,800 square feet. Three facilities are currently utilized for this function, two are structurally sound, but total only one-third the required space, while the third is over 30 years old and is beyond economical alteration and rehabilitation. Aircraft engine disassembly and inspection must be performed under proper controlled environmental conditions and must have special facilities for engine maintenance activities.

Item 2 provides for construction of aircraft corrosion control facility with a scope of 2,955 square yards. The existing 509-square-yard substandard washrack will not allow use of required chemicals, does not provide permanent compressed air supply, and is severely space limited. The warm, humid climate and salt air make proper corrosion control a prime concern at this location (auxiliary airfield No. 9).

Item 3 will provide a 2,724-square-foot armament ballistic test facility. There is no existing facility for testing of high-explosive and incendiary projectiles.

Item 4 provides construction of three new data collection theodolite stations and alteration of one existing station. This project is the fourth and final increment required to provide 35 theodolite stations on this base.

Item 5 is for an armament development test center management facility of 146,000 square feet. This activity currently occupies 31 substandard structures that cannot be economically upgraded. Efficient and effective mission accomplishment is difficult, if not impossible, in the existing widely separated inadequate facilities.

Item 6 is for a new airmen open mess of 16,000 square feet. The currently used facility, with a 10-year design life, but in use for 30 years. is structurally marginal and requires excessive maintenance. The new construction will provide an adequate, permanent, social, and recreational facility which is essential to motivation and long-term retention of an effective professional enlisted force.

The last item provides for addition to and alteration of the existing NCO open mess facility on auxiliary airfield No. 9 presently housed in less than 50 percent of the required space. This project will provide an adequate facility for essential NCO recreation, relaxation, and social activities.

AFSC—EGLIN AFB, FLA.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Aircraft engine shop	$49,600	80
Aircraft corrosion control facility	12,000	95
Armament ballistics test facility	8,200	70
Data collection theodolite stations	11,800	90
Armament development test center management facility	205,000	30
Airmen open mess	44,900	75
Addition to NCO open mess (AUX No. 9)	36,500	98

Mr. SIKES. The request is for $7,039,000.

Mr. SIKES. You don't let those winds go to waste down there. I am looking at the description, 6 miles northeast and 40 miles east of Pensacola. What is the matter with saying 20 miles south of Crestview?

General REILLY. We omitted something here.

Mr. SIKES. It is all good country.

AIRCRAFT ENGINE SHOP

Tell us your problems, because of the lack of an acceptable aircraft engine shop. I can take care of these answers myself if you don't know the right answers.

Colonel MANSPERGER. As you know, there are two primary activities at Eglin that require engine maintenance. One is the 33d Tactical Fighter Wing and it will soon have a very accessible engine shop. The other is the activity supporting Air Force Systems Command. This supports equivalent to a wing of aircraft. There are many diverse types, 16 separate type engines and 22 series, including reciprocating engines and propellers. The work on these is now being performed in a hangar that does not have adequate light, electrical power, dust control, and humidity and temperature controls. The work cannot be satisfactory. This new facility is required to provide engine maintenance support in lieu of that aircraft hangar which will be returned to the aircraft.

Mr. SIKES. What will you do with the space that is vacated?

Colonel MANSPERGER. Aircraft hangar work.

Mr. SIKES. Are you planning to use monorails? If so, how?

Colonel MANSPERGER. These monorails run above the engine shop in such a manner that you can move engines and propellers into position.

Mr. SIKES. Are they cost effective?

Colonel MANSPERGER. Yes, sir.

Mr. SIKES. Give us some more details for the record.

[The information follows:]

MONORAILS IN EGLIN AIRCRAFT ENGINE SHOP

The selection of a monorail overhead hoist was made after careful consideration of other alternatives that were available. Several of the current powerplants require vertical disassembly of the compressor and separation of the cold section from the turbine or hot section of the engine. The load-bearing characteristics of the definitive drawing building structure is adequate to support a monorail system without additional modification except attachment. In order to maximize the utilization of available shop space the monorail was selected over the use of forklifts and cranes in handling the powerplants. The monorail system utilizes electric power for hoisting only and gravity for movement along the track. Some powerplant transporters and maintenance stands are so constructed that a forklift cannot be used to place an engine on them. Slings and a crane or specially modified forklift must be used to accomplish this task with which a high element of risk is associated. A monorail hoist system is a great improvement over either the crane or forklift. The room required to maneuver the crane and forklift is eliminated, thereby making more usable floor space available for mission accomplishment. While electric forklifts are available, current authorizations are for gasoline engine propelled vehicles which require maximum shop ventilation, making their use highly undesirable in either winter or summer.

The acquisition cost of three forklifts and one motor crane is $28,000 with an annual operating cost of $2,985. The initial cost of the monorail system is $10,000 for the 5-ton capacity "U" track, $4,900 for the 7-ton portion and $2,100 for the 1-ton portion; $17,000 total, with an annual operating cost of all three elements of $160. This system eliminates the requirement for two forklifts and one motor crane. Part-time utilization of a forklift for unloading power plants from commercial carriers will still be required.

AIRCRAFT CORROSION CONTROL FACILITY

Mr. SIKES. The present capability of the aircraft corrosion control facility is 100 aircraft per month. What is the requirement?

Colonel MANSPERGER. I am going to answer this in an indirect manner. The present facility cannot adequately support corrosion control. Aircraft are being effectively rinsed on that facility but we do not have the ability to apply the detergents and other things necessary for effective corrosion control. We may be able to wash or rinse 100 aircraft on that facility a month. However, it takes up to 2 days to perform a complete corrosion control on an aircraft. There are between 50 and 60 aircraft and they should receive complete corrosion control treatment at least once every 60 days. When used in a highly corrosive area such as that adjacent to the Gulf of Mexico they should be washed more regularly than that.

Mr. SIKES. What is the current situation with regard to corrosion? Can you keep ahead of it? If not, what does corrosion cost per year, and how much of this could be avoided by the approval of this project? Provide that for the record.

[The information follows:]

Corrosion Problems at Eglin

Corrosion is one of the most serious problems the Air Force has in the maintenance of weapons systems. It is not known for sure how much it costs but the item manager for corrosion control at Robins AFB estimates that corrosion of Air Force equipment costs $1.5 billion per year. Accordingly, the Services are carefully examining methods to prevent and control corrosion. Major efforts to control corrosion are being conducted in the following areas:

a. A Corrosion Control Advisory Board is appointed for each new weapon system to ensure proper emphasis on corrosion prevention throughout design and acquisition.

b. A tri-service working group has been established under the Defense Standardization Program to develop a military standard for materials selection and corrosion control.

c. New polyurethane paints have been developed and proven. All Air Force aircraft will eventually be painted with this coating. SAC B-52s are being completely stripped and repainted with this material as part of depot maintenance.

d. SAC began to explore the corrosion problem from the using command standpoint in 1967. They used a model corrosion control shop to develop manpower, equipment and facility requirements. Based on their study, corrosion control manning in SAC was increased by 155 personnel, corrosion control equipment has been procured, base facility requirements have been developed, and new procedures have been adopted.

e. Air Force bases throughout the world have been cataloged as to "base corrosion severity zones" to identify the degree of local care required.

f. An Air Force-wide base corrosion control facility program was initiated to provide the facilities needed to control corrosion. In establishing this program, corrosion control requirements at each command were studied separately. Requirements are based on use of existing facilities, missions, training, type aircraft, cost effectiveness and environmental and climatic conditions.

Even though corrosion prevention is affected by many things as discussed earlier, it is materially affected by the daily and periodic care which is devoted to a weapon system during its service life. Cleaning, detection of the onset of corrosion, and early treatment can be effectively performed only by base level maintenance. To properly perform these functions, the base must have an adequate facility.

Air Force is currently trying to quantify savings from the prevention of corrosion that will be obtained from projects of this type. However, up to the present time, we have been unable to do so due to the large number of variables and intangibles. Nevertheless, it is not hard to visualize the tremendous potential to be derived from these facilities.

ARMAMENT BALLISTICS TEST FACILITY

Mr. SIKES. You are requesting $232,000 for an armament ballistics test facility. What will be done in this facility? Where is the work now being accomplished?

General REILLY. Mr. Chairman, this is a research and development facility related to target penetration and dynamic effects of high-explosive projectiles at impact. This will be a new facility north and east of Eglin main and in a fairly remote area. This is where high-density penetrators and high-explosive fragmentation ammunition will be fired from guns. The effects of that type of ammunition on targets will be studied.

At the present time the work is being done either by contract or by other Government agencies or a combination of the two at added expense and time.

Mr. SIKES. There will be a saving in this construction?

General REILLY. Yes, sir.

Mr. SIKES. Will this complete the requirement?

General REILLY. Yes, sir. This together with the item provided in the fiscal year 1972 program for the external ballistic research facility will complete our requirement. The fiscal year 1972 project will support study of projectiles in flight, and this project will support the study of projectiles at the terminus or target.

Mr. SIKES. It bothers me to hear you are going to be completing your requirement down there.

General REILLY. This is just for ballistics testing, Mr. Chairman. One aspect of the armament labs.

ARMAMENT DEVELOPMENT TEST CENTER MANAGEMENT FACILITY

Mr. SIKES. You are requesting $4 million for an armament development test center management facility. Spell out the major functions to be accomplished there.

General REILLY. This is to provide a new facility to replace some 31 small substandard facilities which have been in use for many years. Phase 1 of the project, a 2-phase project, will house the electronics test division and the munitions test division activities of the Armament Development Test Center, together with the procurement and controller activities. The second phase of the facility which we propose to include in the 1975 military construction program at roughly the same cost as this increment will provide new and adequate facilities for the Tactical Warfare Center and the Special Operations Warfare Force.

Mr. SIKES. Will that be a separate building or joint use?

General REILLY. Our architect is studying this very closely to see what is the best shape and configuration of the building. We just don't know at this point whether it will be a separate building or an addition to the first phase. They will be collocated.

Mr. SIKES. What will be done with the present facilities?

General REILLY. We intend to tear down 31 of those old buildings.

AIRMEN OPEN MESS

Mr. SIKES. You plan an increase of enlisted men of about 1,000 by the end of fiscal year 1976. Will the proposed open mess handle the anticipated enlisted loading?

General REILLY. Yes, sir. This size has been based upon our projected strength.

Mr. SIKES. What other open mess facilities for enlisted personnel are available on the base?

Colonel SHOOK. We have an NCO open mess of about 30,000 square feet located on the main base.

Mr. SIKES. Do you require them both?

Colonel SHOOK. Yes, sir.

NCO OPEN MESS ADDITION

Mr. SIKES. You are requesting an addition to an NCO open mess at Eglin? Tell us about that requirement.

Colonel SHOOK. This project will provide for alteration and an addition to the existing facility. The activity was started in a small totally inadequate building. The NCO's obtained a loan to construct an addition to it. That is under construction now and for the most part complete. This project will provide a further expansion of that facil to give us the required square footage we need for the NCO's.

Mr. SIKES. Will this complete the requirement?

Colonel SHOOK. Yes, sir.

Mr. SIKES. I have watched this progress for some time. This certainly is a justifiable addition to the NCO open mess. They have done a lot for themselves in trying to accommodate their needs. Are there any friendly questions on Eglin?

THEODOLITE STATIONS

Mr. DAVIS. I am curious to know what kind of a Florida phenomena a theodolite is.

General REILLY. We have a number of cinetheodolites. These are optical instruments which are used to determine the exact position, in space, of aircraft in flight when armament tests are conducted. By using a combination of these theodolites, the position of the aircraft in space at a given point in time can be very accurately recorded. The proper evaluation of ordnance during range testing is dependent upon this accurate data.

Mr. SIKES. Very simple.

Any further questions?

Mr. DAVIS. It may be simple but it does not have a simple name.

General REILLY. It is a common surveying instrument.

It is just like a transit that is used in surveying, except it will take a picture at the same time.

Mr. DAVIS. That is where the cinetheodolite comes from?

General REILLY. That is right.

Pacific Air Forces

Pacific Air Forces—Zone of Interior

The mission of the Pacific Air Forces is to conduct, control, and coordinate offensive and defensive air operations in accordance with tasks assigned by the Commander-in-Chief, Pacific Command. As a major Air Command, it provides administrative and logistical support for Air Force units in the Pacific Command geographical area of responsibility. The requested program for the Pacific Air Forces, Zone of Interior, totals $7,331,000 and is for Hickam Air Force Base.

HICKAM AIR FORCE BASE, HAWAII

Mr. Sikes. It has been requested we turn to Hickam Air Force Base. Insert page 149 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		HICKAM AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
PACIFIC AIR FORCES (ZONE OF INTERIOR)	KNMD	HAWAII

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1937	HONOLULU	SIX MILES WEST OF HONOLULU, HAWAII

11. MISSION OR MAJOR FUNCTIONS

AIRBORNE COMMAND CONTROL SQUADRON

FIGHTER INTERCEPTOR SQUADRON (AIR NATIONAL GUARD)

AEROSPACE RESCUE AND RECOVERY SQUADRON (MILITARY AIRLIFT COMMAND)

SYSTEMS TEST GROUP (AIR FORCE SYSTEMS COMMAND)

PACIFIC AIR FORCES HEADQUARTERS

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	1,316	7,407	2,988	0	0	335	471	1158	13,675
b. PLANNED (End FY 76)	1,615	7,345	2,971	0	0	335	471	1158	13,895

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	4,175	1,179	136,488	137,667
b. LEASES AND EASEMENTS	340	(1) 14	7475	7,489
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				145,156
d. AUTHORIZATION NOT YET IN INVENTORY				4,330
e. AUTHORIZATION REQUESTED IN THIS PROGRAM (Excludes $14,301,000 Family Housing)				7,331
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				32,000
g. GRAND TOTAL (c + d + e + f)				188,817

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE Priority b	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
141-782	Air Freight Terminal Complex I		LS	LS	4,463	LS	4,463
740-266	Commissary I		SF	73,500	2,868	73,500	2,868
	TOTAL				7,331		7,331

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HICKMAN AIR FORCE BASE

Hickman Air Force Base, 6 miles west of Honolulu, Hawaii, is headquarters for the Pacific Air Forces. Its mission is support of the Pacific Air Forces Headquarters, a military airlift support wing under Military Airlift Command, Airborne Command Control Squadron, Systems Test Group under the Air Force Systems Command, and an Air National Guard Fighter Squadron. The requested program for $7,331,000 involves the construction of two items.

The first item, the Air Freight Terminal complex will provide a replacement for the existing facility which is poorly configured, too small, inefficient, and incapable of accommodating the standard materials handling systems. In addition, the current location is isolated from the airfield and sterilizes many acres of valuable land.

The other item is for the construction of a new 73,500-square-foot commissary which is required to replace the existing five substandard, 30-year-old, separated buildings now being used.

PACAF.—HICKAM AFB, HAWAII—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Air freight terminal complex	$190,000	75
Commissary	120,000	100

Mr. SIKES. The request is $7,339,000 for an air freight terminal complex. Show us on the map the location of these two facilities.

BRIEFING BY COLONEL LAMB ON HICKAM LAND-USE PLANS

General REILLY. Mr. Chairman, with the permission of the committee we would like to spend a few minutes and give you a briefing on our land-use plan at Hickam Air Force Base and show you how the projects in the 1974 program fit in that. We have with us Colonel Lamb, who is the base civil engineer at Hickam; he has been devoting a great deal of time to this particular program.

Colonel LAMB. Mr. Chairman, tomorrow is the 38th birthday of Hickam. Since 1935, the basic 2,225 acres composing Hickam have remained relatively stable. We do not have an encroachment problem. We are encroached. To the north there is Pearl Harbor Naval Air Station. To the west is the Pearl Harbor Channel to the main ocean. To the south is Fort Kamehmeha. We are trying to obtain this from the Army and already have use rights to over 55 percent of the acreage. Further to the south is the Pacific Ocean. It would be quite expensive to enlarge the base through landfill in the ocean. In addition, it is highly doubtful that we would be able to expand into that area. The FAA and the State of Hawaii have started construction of a reef runway, a runway offshore on one of the coral reefs. The Hickam boundary abuts directly to the Honolulu International Airport. That is a State-owned airport. While the Air Force maintains about the first 5,000 feet of the runway, to give you a correlation with the State, this is our boundary. The primary runway is 12,367 feet. There is a second runway of 6,950 feet, and will be a tertiary of 9,000 feet, the last being the reef runway that will be built offshore. Construction has started.

Considering Hickam's land and sealocked condition, it became very apparent that if we were to continue with the development and modernization it would be necessary to take a new look within our exist-

ing boundaries and analyze all permanent assets. As we did this we found that the basic base was arranged around a 1937-constructed triangular runway configuration. Later in 1951 the new runway complex was opened. This apex of the old triangle results in large areas of totally unused land with the air passenger terminal in this location and the freight terminal here. Large aircraft and their inherent noise were bulked to the very physical heart of the base. This represented very poor land utilization.

In addition, the POL fueling facilities in these areas are deteriorated. They were installed in 1937, 1939, and 1941. This caused pollution. The local citizenry and the news media were very concerned about this pollution to the ocean. It is estimated we have approximately 600,000 gallons of free-floating POL in the coral surface. We are now capturing this, pumping it out and processing it for current use. The cost to rehab this area alone would be approximately $9 million. One of the things that we felt would be better was to look and see if there were other locations we could go. There are two major and uneconomical land users at the present time. One is a hazardous cargo parking area that uses a large majority of the main base, and the other a 1939-constructed munitions storage area. The munitions facility is so outmoded it cannot accommodate modern-day weapons loading equipment.

Using those and other premises, we developed an overall land-use concept oriented around the basic runway. Putting in aprons and aircraft-handling areas in this general vicinity as close as possible to the active area minimizes ground time, turnaround and servicing and reduces overall costs.

Immediately adjacent to that would be our operations control area. Close to the aircraft would be our industrial support facilities. We have thus created a nonpeople zone on the base.

Immediately adjacent to that nonpeople zone we would put in our major truck traffic routes and create a natural buffer zone between the people and nonpeople zones, adding wherever possible recreational facilities immediately adjacent to this buffer zone, thus increasing its effect.

Outside we would end up with all of our residential housing, both married and bachelor, a primary community support function, and a secondary community support function. There were many things we could do on our own to develop this new plan and free this valuable acreage. The overall acreage released will be 446½ acres, the cost of which is conservatively estimated at $45 million. This represents cost avoidance of land. We tightened our belt and looked at our own facilities. In a major cleanup effort we have, in the last 3 years, disposed of 150 World War II structures, valued at $680,000. Another 17 World War II wooden structures are projected for disposal in fiscal year 1974 that are valued at about $170,000. After doing as much as we could within our own capability, we took a look at our MCP. We are proud to announce that the fiscal year 1971 MCP project for the passenger terminal located in the operational control area is now operational. The two dormitory projects included in the 1973 MCP construction began 10 days ago in their proper location. We have already moved those aircraft associated with the passenger operation down to this area of the base close to the runway.

In the 1974 program we propose, sir, an aircraft terminal that would permit the relocation of aircraft from this location to here, an apron sufficient to handle two C–5 aircraft or four C–141 aircraft. It would have modern updated refueling capability, thus eliminating the POL contamination problem we have in this area. The physical move to the new freight terminal frees this entire landmass for development of housing.

Mr. SIKES. For whom?

Colonel LAMB. Military personnel. Concurrently with the 1974 MCP line item for the air freight terminal, we are proposing 400 housing units in the fiscal year 1974 military family housing appropriation. Construction would be concurrent with construction of the freight terminal. As the freight terminal moves to its new location we would propose to move physically into the family housing area, and that in addition would free land for additional family housing. We would ask for that in future family housing programs.

Finally, the fiscal year 1974 program includes a commissary to be located in the primary community center. It would replace a facility that was built in 1941. The present facility is totally unsanitary. We have a hard time even keeping blood from the meatcutting room from escaping from the building. It is completely substandard. We believe that all three of these programs are quite compatible and can go on concurrently. In the development of Hickam these are three of the most important items, along with the passenger terminal complex already approved.

GROWTH POTENTIAL

Mr. SIKES. You have given us a realistic concept that is very interesting. The question is, are you getting too tightly squeezed in there? It seems you are all right in your proposed use of the land that is available for uses that we can determine, but what about future requirements? Are you getting squeezed in to the point where the future effectiveness and efficiency of this base itself is going to be jeopardized?

Colonel LAMB. Approximately 3 years ago, when we first started our look-see, we felt we were in that posture of extreme limitation. However, as we looked at this new landmass concept and this new plan, we found that a great deal of flexibility is open to us. We have capability for more apron areas. We found we had more capability than was originally intended for this base or is now programed. Using that concept we do not feel it is a problem, and recognizing the entire airport complex which we must utilize, we see no major problems on total loading. This will become primarily a landing runway and this will be a takeoff runway. That in itself helps to eliminate the noise pollution in the downtown area.

Mr. SIKES. Is it not a feasible thing to contemplate moving your operations to the outlying lands where land values are not as high and where land is more plentiful?

Colonel LAMB. At the present time there are various studies that have been proposed by various agencies. The services have looked at it and it is quite costly to go to the other islands. We are finding within the State of Hawaii that the outer islands are also beginning to face problems due to masses of people moving to them. There does not appear to be at this time any necessity to give up the physical plant we have for such a move.

Mr. SIKES. The physical plant you have here represents a large investment and it would be very costly to duplicate it. But with the land prices you quoted it might not be completely unrealistic.

Colonel LAMB. Yes, sir. These land prices are based on the recent estimates for this general area, land which in 1960 was valued at $80,000 per acre is now estimated at $100,000 per acre.

HOUSING

Mr. SIKES. How many housing units are there at Hickam?

Colonel LAMB. We have under Hickam's control 3,101 family housing units; 498 are at Wheeler. The remainder are here at Hickam. These last 200 are being completed under a prior-year military family housing program, 100 are occupied at this time.

Mr. SIKES. You may have too much invested, too much at stake, considering the family housing, so much that you can't consider going elsewhere?

Colonel LAMB. Sir, for our population we have a requirement for between 3,000 and 4,000 family housing units alone. That gives a great deal of credence to the off-base housing assets of about 1,500 units. Our total population is about 15,000.

EXCESSING OF AIR FORCE LAND

Mr. MCKAY. This is secondary related to Hickam, but in how many areas are we now excessing military property or Government property with which we will be back in this same situation as land values appreciate and we need to expand and we will be wanting that property back again? Do you have ideas about that?

I know the President and the administration came out and said we are going to excess so much land and give it to parks. I wonder if you are not going to be requesting it back as land values go up?

Land cost is growing everywhere. You will be in the same pinch with land values everywhere.

General REILLY. Yes, sir, we have been very active in the President's program under Executive Order 11508. There have been over 160 surveys at our installations and we have already reported to Congress about 27,000 acres of land that can be surplused from our installations. The use of the land has been carefully reviewed and we feel that the land that we have been able to release is not in the same category as this.

They have been little bits and parcels that we feel can be released without affecting the current or the projected utilization of the base. But where land is needed we have taken a firm stand in wanting to retain the land because it is very true that land values are going up drastically.

SCOPE OF OPERATIONS AT HICKAM

Mr. SIKES. There is another solution to these problems and that is to cut down on the scope of your operations there. Is that possible?

General REILLY. At Hickam, sir?

Mr. SIKES. Yes.

General REILLY. Sir, we don't envision any material reduction in the activity as long as we have a Pacific Air Force and the requirement for a headquarters to operate it along with the various other missions supported by Hickam.

Mr. SIKES. That isn't the question.

Can you cut back on the activity in order to avoid some of this congestion?

Colonel LAMB. A large portion of our mission, if I may say, sir, is transient aircraft traffic working its way either through the Pacific or back from Asia. We handle a great deal of transient loads.

We have had as many as 100 transient aircraft on the ground at one time.

General REILLY. Colonel Reed, do you have any comment regarding the mission level at Hickam?

Mr. SIKES. I thought that most of your transients were coming through Alaska.

Colonel REED. The mid-Pacific route supports almost the same amount of aircraft as the North Pacific route that comes up through Alaska down into Japan or Okinawa. Studies made recently in conjunction with the decision to terminate fulltime operation at Wake Island, on the mid-Pacific route, revealed that we still need the Pacific route and we will have high-density traffic there.

We were able to avoid continued use of Wake because of longer range of the aircraft, but Wake's closure was predicated on the use of the Hickam stop as a vital element in getting us into Guam.

Mr. SIKES. How much of this traffic is recreational traffic?

Colonel REED. Recreational?

Mr. SIKES. Yes.

Colonel REED. Projections I have seen have all been predictated on MAC required movements both contract carriers for personnel as well as military airlift. I am not aware that there is a high level of other than direct military-support traffic through there.

Mr. SIKES. How do you classify the traffic that is going to Hawaii for recreational purposes?

Colonel REED. If you are referring to R. & R. flights out of Vietnam and so forth——

Mr. SIKES. And out of the United States.

Mr. TALCOTT. That has ended.

Colonel REED. Commercial, sir, if you are talking about the R. & R. business where wives from the States go to join their husband on R. & R. from Southeast Asia.

That is generally on commercial charter or commercial flights, not military.

Mr. SIKES. Are they accommodated at Hickam or elsewhere?

Colonel REED. They land at the International Airport and are processed there.

The Military Airlift Command contract carriers that are carrying official duty personnel are processed through Hickam.

General REILLY. But there has been a great reduction, hasn't there?

Colonel REED. Yes; in the R. & R. business.

COMMISSARY

Mr. SIKES. Is the commissary the same one which was requested last year?

General REILLY. Yes; the identical project.

Mr. SIKES. Does it have a higher or lower priority than the others in this year's program?

General REILLY. Sir, it is No. 1 of our three commissaries.

Mr. SIKES. What is the status, the condition, of the current commissary facility?

General REILLY. Colonel Lamb, would you address the commissary please?

Colonel LAMB. As I mentioned earlier, it is almost totally unsatisfactory. It is a World War II wooden structure. It has very minimum cold storage capability. It has been an add-on as add-on can. Its parking lot is located adjacent to a family housing area and the family housing personnel share the lot with the commissary customers.

FREIGHT TERMINAL

Mr. SIKES. The freight terminal at Hickam is a permanent facility, is it not?

Colonel LAMB. Yes, sir, it is.

Mr. SIKES. What will you use it for if the new one is built?

Colonel LAMB. Because of its physical location adjacent to the heart of the base and adjacent to the airmen's area, and also because it possesses drop ceilings and central air, it would be converted to a joint service club-educational center.

We feel that that would be the best utilization for the structure at minimum cost.

FAMILY HOUSING

Mr. SIKES. Will the parallel reef runway to be built by the State affect your family housing plans?

Colonel LAMB. No, sir. If anything, it will improve our noise posture within the Hickam boundaries in that the takeoff noise will occur about 2,000 feet further out.

Mr. SIKES. What alternatives does the Air Force have for providing adequate housing here? What would they cost?

[The information follows:]

ALTERNATES TO HICKMAN FAMILY HOUSING PROJECT

Presently, the Air Force can only provide family housing by military construction or through the family housing leasing program. In Hawaii the maximum cost allowed by public law is presently $42,000 per unit. Our project in this year's program is approximately $37,000 per unit. Under the leasing program the Air Force can execute leases at an average cost not to exceed $255 per unit per month (including utilities) with no individual unit exceeding $300 per month (including utilities).

TOTAL COST OF LONG-RANGE PLAN

Mr. SIKES. What will be the total cost of your long-range plan at Hickam? Will this depend on the number of additional missions you put here? Provide that for the record.

[The information follows:]

HICKAM LONG-RANGE PLAN

A copy of the development plan for the modernization of Hickam AFB has been furnished to the committee. This plan envisions orderly development of the base over a period of time. Additional MCP requirements proposed for fiscal

year 1975 and future are estimated at $71.7 million. Operations and maintenance and expansion of family housing are to be phased over a similar period. This plan provides the utmost flexibility and is adaptable to all foreseeable or planned missions. The total cost will depend on the length of time required to implement the plan and whether or not all requirements are ultimately approved and funded.

Mr. SIKES. Questions on Hickam?

FAMILY HOUSING SITE

Mr. DAVIS. On that space that you are freeing up where you show the family housing, how many units overall will you be able to put in there?

Colonel LAMB. At the present time in this total orange area, sir, using a moderate construction density, we will be able to come up with approximately 705 to 750 family housing units and still have enough space for 20 acres to go to the State department of education for a junior high school and grade school.

Mr. DAVIS. What is your cost factor out of Hickam?

Colonel LAMB. Approximately 1.3, I believe, sir.

General REILLY. That is correct.

Mr. TALCOTT. Mr. Chairman.

Mr. SIKES. Yes.

REEF RUNWAY

Mr. TALCOTT. What is the relationship between this reef runway and yours? Is it compatible with yours or will there be a conflict trafficwise?

Colonel LAMB. No, sir, we are not envisioning any conflict. This airport is controlled by the FAA as far as the control zones are concerned, and the basic premise and reason for the reef runway is to move the noise pollution that was resulting in downtown Honolulu due to takeoffs on this runway further out. This permits the flight pattern to miss the downtown and allows the planes to turn short so that this would then become a landing runway only, sir, and this would become a takeoff runway.

Mr. TALCOTT. But would you both use the same runway?

Colonel LAMB. Yes, sir, we use the same runways today, and we also share four left and four right which are on the State side.

Mr. TALCOTT. So you have joint use now, and this would just be making the joint use more favorable to everybody that uses it?

Colonel LAMB. Yes, sir, that is correct, with more capability.

Mr. TALCOTT. What is the problem, if any, of access to that runway? Does it cut across your property?

Colonel LAMB. Yes, sir; there will be a taxiway going down through our property and the Army land at Fort Kamehameha. The State and FAA are replacing all facilities affected on the Air Force side.

Mr. TALCOTT. So the cost is not a problem, but how about the inconvenience or adverse effect on your operation?

Colonel LAMB. We envision no adverse effect due to this particular taxiway being constructed. One of the reasons is, as shown on our zone map, this is an Air National Guard industrial area, over here is a weapons storage site, sir, and the others are purely recreation.

LAND USE

Mr. TALCOTT. Are you saving any for open space?

Colonel LAMB. Yes, sir.

Mr. TALCOTT. One impression we get is that you are just crowding everything onto this little place so that you are going to feel cramped.

Colonel LAMB. No, sir, I would estimate that about 150 acres would still be totally free.

Mr. TALCOTT. Is the triangular landing field system being used anyplace any more, or is that an outmoded idea? It is a terrible waste of space.

General REILLY. It is being used for ground operations.

Colonel LAMB. I believe his implication was at other bases.

Mr. TALCOTT. You look down when you are crossing over America and you see all kinds of triangular airports, and you know that they were constructed by the Air Force in about 1930 or 1940 or something. That was a concept that you had at that time.

Apparently crosswinds were a big problem. Your pilots weren't capable enough or the airplanes weren't good enough to land in a crosswind, so you had to have a runway for every way the wind blew.

General REILLY. That is right.

Mr. TALCOTT. This is not true any more, as I understand it.

General REILLY. That is correct. Most of our World War II bases had two or three runways about 3,000 to 5,000 feet long so that you could have wind coverage in just about any direction.

At most of those fields, we have gone to one runway, extended the one runway. Some of them have two, but very few of our bases have crosswind runways per se any more.

Mr. TALCOTT. This seems like a very extravagant use of land not only in acreage but by the inconvenience caused depending on which runway you were using. You had all kinds of taxiing. Some pilots had more taxi time than they did flying time, really.

General REILLY. Yes, sir.

Mr. TALCOTT. I really want to commend you on this. I think this is an outstanding job of planning and utilization of land. I think this is what you get when you get a planner that knows what he is doing and developing modern concepts, and I just hope that this technique can be used at maybe some other air bases because the utilization of land looks to me considerably improved over the triangular shape.

General REILLY. Yes, sir.

Mr. SIKES. This is impressive, General Reilly and Colonel Lamb. A good job has been done here.

Colonel LAMB. Thank you, sir.

ACCESS ROADS

Mr. TALCOTT. How about the access from the outside? I can only see one entryway; and if you get 400 more housing units and you open up 200 more units here, it is going to be like a freeway if you only have one entrance to this base.

Is there a problem of traffic circulation, automobile circulation, around the base?

Colonel LAMB. There will be a new Interstate Highway coming through. It will come and turn north at this point, and at the Pearl Harbor interchange there will be a connection for Hickam and Pearl Harbor. It is anticipated that the Nimitz spur will flow all the way down to the centralized administrative complex and centralized industrial complex with a no red light, no crossing configuration. Where the Nimitz spur comes in, there will be four lanes in and four lanes out.

All major traffic will come in that artery and down. All truck traffic will feed off of the interstate to a local feed road and will come in through here at a traffic routing bypass and secondary point of entry.

Mr. TALCOTT. That will be separated from the passenger traffic?

Colonel LAMB. Yes, sir. We must get this traffic down without interference. There will be no entering into the artery from the family housing area.

Mr. TALCOTT. How about to the north? Is there any entrance over there?

Colonel LAMB. I have a divided six-lane highway, three lanes either side, at this point that will turn and come down what is an existing ramp. We are looking at whether that should be four lanes, for example. That will be a secondary feed flow for this community center and for these family housing units.

SCHOOLS

Mr. TALCOTT. Are there adequate schools on base to accommodate all the students that are on base?

Colonel LAMB. No, sir, there are not. At the present time we have one elementary school here run by the State, one here run by the State, and one just off the base here run by the State. The State is proposing that if we will identify the specific land to be used to them, they will construct, possibly concurrently with the family housing, an elementary school here to take care of this community and a junior high school to take care of the entire base.

We would still have to have our high school offbase as our density will not support a high school.

Mr. TALCOTT. I have no further questions.

Mr. MCKAY. Further questions?

Seeing that is so, General, we will adjourn until tomorrow morning at 10 o'clock.

General REILLY. Thank you, sir.

THURSDAY, MAY 31, 1973

MATHER AIR FORCE BASE, CALIF.

Mr. PATTEN. The committee will come to order.

Turn to Mather Air Force Base, Calif. Insert page 83 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		MATHER AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	PLXL	CALIFORNIA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1918/1940	SACRAMENTO	TWELVE MILES EAST NORTHEAST OF SACRAMENTO, CALIF

11. MISSION OR MAJOR FUNCTIONS

NAVIGATOR TRAINING SCHOOL

HEAVY BOMBARDMENT WING (STRATEGIC AIR COMMAND)

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	1,252	3,654	1,403	1,258	0	29	58	0	7,654
b. PLANNED (End FY 76)	1,170	3,753	1,391	1,235	0	29	58	0	7,636

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	5,791	535	93,556	94,091
b. LEASES AND EASEMENTS	7	2	2	4
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				94,095
d. AUTHORIZATION NOT YET IN INVENTORY				3,284
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				1,993
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				4,800
g. GRAND TOTAL (c + d + e + f)				104,172

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b Priority	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
134-375	Radar Flight Control Center I		SF	2,884	310	2,884	310
610-245	Base Personnel Office I		SF	50,200	1,683	50,200	1,683
	TOTAL				1,993		1,993

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MATHER AIR FORCE BASE

The next base is Mather Air Force Base, located 12 miles east-northeast of Sacramento, Calif., where the primary mission is navigator training school. Also supported is a heavy bombardment wing under control of the Strategic Air Command. The requested program at this base is $1,993,000 involving construction of the following two items:

The first project provides for the construction of a 2,884 ft.^{2} radar flight control center. Flight control is now performed from an outdated mobile facility, which cannot be modified to accept modern equipment. Existing facility restrictions include: operating space too small, high noise levels in operating area, inadequate environmental control, and equipment limitations.

The second project will provide for the construction of a new 50,200 ft.^{2} base personnel office. Personnel office activities are housed in widely separated wood frame structures beyond economical restoration to functional use.

ATC—MATHER AFB, CALIF.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Radar flight control center	$25,300	90
Base personnel office	75,700	100

Mr. SIKES. Assuming for the moment that your base structure in support of SAC may possibly be subject to some further reduction, how would you rate Mather for retaining a SAC mission?

Colonel REED. Mather contains G model B–52's. We would expect that there would not be a reduction in this model and with base posturing and other considerations we would expect Mather would continue in the B–52 strategic role.

Mr. PATTEN. Whether or not the SAC mission stays, will you have a lesser number of aircraft at this base as the result of the reduction in navigation training aircraft?

General REILLY. Yes, sir, there will be a reduction.

Mr. PATTEN. How urgent is the radar flight control center facility?

General REILLY. Mr. Chairman, this project is urgently needed. What it does is replace a mobile ground controlled approach system or radar with a fixed precision radar.

This is especially important in view of the new jet T–43 training aircraft which will be introduced very shortly.

Mr. PATTEN. Can you show savings as a result of constructing the base personnel office?

General REILLY. Yes, sir. We show savings of about $60,000 a year, principally in operation and maintenance. Also, there will be a one time cost avoidance of something over $600,000.

Mr. PATTEN. What are the problems with operating in the present facility?

General REILLY. At the present time operations are performed in 9 different buildings dispersed around the base with a small portion in the headquarters. It is this fragmented operation and the inefficiency that goes with it that is our principal problem. The buildings are substandard also. Most of them will be disposed of.

Mr. PATTEN. Have you looked at your projected utilization of the training space which has been constructed at Mather? Will this be fully utilized?

General REILLY. Yes, sir. It will be fully utilized for training requirements.

Mr. PATTEN. All there any questions?

Mr. DAVIS. These buildings that you are now using, how old are they?

General REILLY. World War II.

Mr. DAVIS. Are they temporary or semipermanent?

General REILLY. Wood frame built for temporary life.

Mr. DAVIS. That is all.

RANDOLPH AIR FORCE BASE, TEX.

Mr. PATTEN. Turn to Randolph Air Force Base, Tex.

Insert page 86 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		RANDOLPH AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	TYMX	TEXAS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1931	BEXAR	15 MILES NORTHEAST OF SAN ANTONIO, TEXAS

11. MISSION OR MAJOR FUNCTIONS

AIR TRAINING COMMAND HEADQUARTERS

INSTRUMENT FLIGHT TRAINING CENTER

AIR FORCE MILITARY PERSONNEL CENTER

PILOT INSTRUCTOR SCHOOL

RECRUITING SERVICE HEADQUARTERS

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
a. AS OF 31 December 72	1,785	3,668	2,726	261	0	83	34	0	8,557
b. PLANNED (End FY 76)	1,766	3,589	2,699	261	0	83	34	0	8,432

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	3,492	189	58,359	58,548
b. LEASES AND EASEMENTS	119	(1) 27	88	115
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				58,663
d. AUTHORIZATION NOT YET IN INVENTORY				674
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				1,463
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				8,300
g. GRAND TOTAL (c + d + e + f)				69,100

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
610-711	Data Processing Facility I		SF	30,000	1,463	30,000	1,463
	TOTAL				1,463		1,463

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RANDOLPH AIR FORCE BASE

Randolph Air Force Base, located 15 miles northeast of San Antonio, Tex., supports Headquarters Air Training Command, Instrument Flight Training Center, Pilot Instructor School, USAF Military Personnel Center, and Recruiting Service. The program requests $1,463,000 for a 30,000 SF data processing facility. Data processing functions are currently performed in two poorly configured, inadequately sized buildings. Lack of storage space, improper functional layout, poor environmental control, and dispersed functional components make accomplishment of data processing activities most difficult.

ATC—RANDOLPH AFB, TEX.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Data processing facility	$132,000	100

Mr. PATTEN. How are you currently performing the functions which would be housed in the data processing facility, and what functions are these?

General REILLY. Mr. Chairman, this particular facility supports the data processing activity of Headquarters, Air Training Command, as well as the base at Randolph. It houses the standard base-level computer, Burroughs 3500, and three Honeywell computers associated with the major command function.

At the present time, the bulk of the activities are being conducted in a facility designed as a temporary messhall during World War II and some of the data processing activities are located in the Air Force Military Personnel Center. Our problem is the functional and physical inadequacy of aged facilities and also the requirement to colocate our automatic data processing equipment with the people who operate the equipment.

Mr. PATTEN. You use B–3500 equipment. Are these adequate computers for your need?

General REILLY. Yes, sir. The Burroughs 3500 is the new Air Force standard base computer which takes care of accounting and finance, personnel, and civil engineering activities. The 800's and 200's are the standard major command headquarters-type computer. This is modern equipment.

Mr. PATTEN. Provide for the record a listing of the uses to which the current space would be put and show what requirement for additional space there is for each of these functions.

[The information follows:]

RANDOLPH AFB—USES OF CURRENT SPACE—ADDITIONAL SPACE REQUIRED

The 8,000 square feet occupied by Air Training Command data automation in building No. 499 on Randolph AFB consists of 5,700 square feet of computer and technical support space, and 2,300 square feet of office space. After Air Training Command vacates the space, it will be used by the Military Personnel Center to house personnel and equipment that are occupying 8,200 square feet of leased space in San Antonio. As of April 1, 1973, the total administrative space requirement on Randolph AFB was 1,028,704 square feet. Available administrative space—adequate and repairable substandard—totals 686,289 square feet, about 67 percent of the requirement. This leaves a basewide administrative space shortage of 342,415 square feet.

Mr. PATTEN. Is Randolph limited in conducting flying operations?

Colonel REED. Currently we are still continuing to operate the T-37 and T-38 instructor schools there. We do not have limitations at present to preclude effective use of the airspace. There are some negotiations currently going on considering San Antonio Airport which might, if they involve proposals for runway construction, pose some problems. However, these decisions have not been reached or the planning finalized.

BASE OPERATING AND REAL PROPERTY COSTS

Mr. PATTEN. Can you provide for the record the military personnel and operation and maintenance costs of running Randolph Air Force Base—as opposed to the personnel and O. & M. for the various missions which are assigned here? Also show what the real property operations and maintenance costs are for the base.

[The information follows:]

MILITARY PERSONNEL AND O. & M. COST VERSUS REAL PROPERTY—RANDOLPH AIR FORCE BASE

The fiscal year 1973 fund requirements (excluding assigned missions) for base operating support and real property maintenance at Randolph AFB, Tex., are:

	Thousands
Base operating support:	
Operations and maintenance	$16,942
Military personnel	26,442
Total—base operating support excluding real property maintenance shown below	43,384
Real property maintenance:	
Operation and maintenance (including family housing)	7,584
Military personel	1,743
Total	9,327

Mr. PATTEN. I note that while Randolph is a relatively small base, it has annual real property O. & M. costs of about $7.7 million. How do you explain this?

General REILLY. $7.7 million, Mr. Chairman, I would have to look at that in more detail. I would think for one of the standard training command bases that that figure would not be out of order. I would think in terms of $5 to $8 million a year, civil engineering real property costs. I would have to look and see just how that stacks up against our standards.

Mr. PATTEN. Is Randolph a good base for the Air Force to retain?

General REILLY. Yes, sir. One of the best.

Mr. DAVIS. Can you give us any information here as to savings in numbers of people through the construction of this new data-processing facility?

General REILLY. Sir, I don't think it will result in any savings in people. It will result in a sizable cost avoidance, about $300,000 required to upgrade the old temporary messhall if we must continue to use it. There will be some annual savings of roughly $5,000 in transportation costs, caused by operating in two locations. I believe there will not be any significant reduction in personnel.

Mr. DAVIS. That is all.

REESE AIR FORCE BASE, TEX.

Mr. PATTEN. Turn to Reese Air Force Base, Tex.
Insert page 88 in the record.
[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		REESE AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	UBNY	TEXAS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1942/1949	LUBBOCK	SIX MILES WEST OF LUBBOCK, TEXAS

11. MISSION OR MAJOR FUNCTIONS

UNDERGRADUATE PILOT TRAINING SCHOOL.

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	391	1,419	685	338	0	10	12	0	2,855
b. PLANNED (End FY 76)	380	1,430	685	332	0	10	12	0	2,849

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	2,402	397	28,391	28,788
b. LEASES AND EASEMENTS	603	(2) 29	0	29
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				28,817
d. AUTHORIZATION NOT YET IN INVENTORY				4,293
e. AUTHORIZATION REQUESTED IN THIS PROGRAM (Excludes $185,000 Mobile Home Spaces)				4,211
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				5,400
g. GRAND TOTAL (c + d + e + f)				42,721

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
134-375	Radar Flight Control Center I		SF	2,884	368	2,884	368
171-212	Flight Simulator Training Facility I		SF	64,240	2,843	64,240	2,843
442-758	Base Supply Facility 30		SF	56,945	1,000	56,945	1,000
	TOTAL				4,211		4,211

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REESE AIR FORCE BASE

The seventh of the 11 bases to be considered is Reese Air Force Base, located 6 miles west of Lubbock, Tex. This base supports an Undergraduate Pilot Training School. The program requested for this base amounts to $4,211,000 to construct three items.

The first item provides for the construction of radar flight control center with a scope of 2,884 square feet. A mobile facility currently houses the radar flight control function. The mobile facility outdated, inadequate, and substandard, cannot be modified to accept modern equipment.

The second item provides for construction of a 64,240-square foot flight simulator training facility. There are no existing facilities which are available to house new simulators required for undergraduate pilot training.

The last item is for the construction of a 56,945-square foot base supply facility. Base supply now utilizes a building over 30 years old so deteriorated that it is considered a safety hazard with special precautions required during high winds.

ATC—REESE AFB, TEX.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete July 31, 1973
Radar flight control center	$32,000	80
Flight simulator training facility	170,000	10
Base supply facility	33,000	70

BASE SUPPLY FACILITY

Mr. PATTEN. What is the requirement for a base supply facility?

General REILLY. Mr. Chairman, our requirement here is to replace temporary buildings that are World War II vintage, over 30 years old. At the present time we are using almost 50,000 square feet of substandard facilities. The principal problem is that the buildings have low ceiling heights, and columns are spaced very close together. They are not functionally adaptable to the modern warehousing handling equipment which you referred to earlier.

This will permit us to realize savings along with the increase in efficiency that comes with modern processes.

Mr. PATTEN. Will it complete the requirements in this area?

General REILLY. Yes, sir, it will. This will complete our warehousing requirement for base supply.

FLIGHT SIMULATOR TRAINING FACILITY

Mr. PATTEN. You are requesting a flight simulator training facility in the amount of $2,843,000. Can you discuss the Air Force's program to provide these simulators at its training bases.

Colonel BALLIF. This is part of a program to modernize and to add to the state of the art in simulators in the undergraduate pilot training program, the intent being to substitute for hours now spent in the aircraft during the instrument portion of the training by the use of the simulators on the ground. They are able to simulate maneuvers that can be done only sporadically in the air as weather conditions permit. They can simulate low penetrations through low ceilings and flying in various weather conditions. By using the advanced state of the art in simulation that we have today we are able to simulate these maneuvers on the ground by the use of video capabilities in cockpits mounted on motion bases. These will actually simulate the motion, visual cues, and all things which go towards creating a pilot training environment.

SCHEDULE FOR INSTALLATION OF SIMULATORS AT UNDERGRADUATE PILOT TRAINING BASES

Mr. PATTEN. Provide for the record the schedule for the installation of these simulators at training bases. Also show the schedule for facility construction and equipment procurement at each base.

[The information follows:]

UPT FLIGHT SIMULATOR, PROCUREMENT, INSTALLATION AND FACILITY CONSTRUCTION SCHEDULE

Annual MCP	Base	Simulator procurement schedule [1]	Simulator delivery schedule	Facility construction start	Facility construction complete	Start equipment installation
Fiscal year:						
1974	Reese	4 fiscal year 1974, 12 fiscal year 1975	4—May 1976 4—June 1976 4—August 1976 4—September 1976	November 1974	February 1976	May 1976.
1975	Randolph	8 fiscal year 1975	4—November 1976 4—December 1976	August 1975	August 1976	November 1976.
1975	Williams	8 fiscal year 1975, 8 fiscal year 1976	4—February 1977 4—March 1977 4—May 1977 4—June 1977	September 1975	December 1976	February 1977.
1976	Vance	16 fiscal year 1976	4—August 1977 4—September 1977 4—November 1977 4—December 1977	February 1976	May 1977	August 1977.
1976	Laughlin	8 fiscal year 1976, 8 fiscal year 1977	4—February 1978 4—March 1978 4—May 1978 4—June 1978	September 1976	December 1977	February 1978.
1977	Columbus	16 fiscal year 1977	4—August 1978 4—September 1978 4—November 1978 4—December 1978	February 1977	May 1978	August 1978.
1977	Moody	8 fiscal year 1977, 8 fiscal year 1978	4—February 1979 4—March 1979 4—May 1979 4—June 1979	September 1977	December 1978	February 1979.
1978	Webb	16 fiscal year 1978	4—August 1979 4—September 1979 4—November 1979 4—December 1979	February 1978	May 1979	August 1979.
1978	Craig	8 fiscal year 1978, 8 fiscal year 1979	4—February 1980 4—March 1980 4—May 1980 4—June 1980	September 1978	September 1978	February 1980.

[1] The numbers shown are cockpit positions.

SIMULATOR INSTALLATION SCHEDULE—UPT SIMULATOR FACILITY CONSTRUCTION AND INSTALLATION SCHEDULE

Fiscal year and base	Estimated construction cost (millions)	Number of cockpit positions
1974: Reese	$2.8	16
1975:		
Randolph [1]	1.5	8
Williams	3.0	16
1976:		
Vance	3.0	16
Laughlin	3.0	16
1977:		
Columbus	3.0	16
Moody	3.0	16
1978:		
Webb	3.0	16
Craig	3.0	16
Total	25.3	136

[1] Simulators at Randolph AFB support the pilot instructor training program (PIT).

TYPE OF SIMULATION

Mr. PATTEN. Let us go back to the simulator. I thought that you had always had them. Do you plan to install these modern state of the art simulators, as you call them, at all of the UPT bases?

Colonel BALLIF. Yes, sir, at all bases of the UPT complex. I have a couple of pictures here that give you an example of what we are speaking of as opposed to what we have now, which are fixed installations. They don't have a motion base as such. These new simulators are mounted on a hydraulically driven leg which puts the cockpit mounted on top of the motion base to 6° of pitch or bank or roll, and through application of computer techniques they are able to simulate all of the sensations experienced in flight.

In addition, there is a visual capability through the use of a closed-circuit TV system and model board which gives the pilot a full picture of what he would be seeing through the windscreen of the aircraft. Perhaps you have seen the television ads for American Airlines; this is exactly the type of simulation we are adding to the undergraduate pilot training system.

COSTS AND BENEFITS OF SIMULATOR TRAINING

Mr. PATTEN. What is this total program expected to cost for facilities and equipment? How much do you expect to save?

General REILLY. $25.5 million over a 5-year span.

Mr. PATTEN. Are there savings?

Colonel BALIFF. That is the facility requirement. Did you ask for facilities?

Mr. PATTEN. For the total program.

Colonel BALLIF. The total program is about $198 million.

Mr. PATTEN. How much do you expect to save?

Colonel BALLIF. The intent is not directed toward savings of money with this activity, sir; it is the object to produce better pilots. The intent is to take the instrument training which was formerly accomplished in the air and put it into the simulator, then add the substituted flying time to other phases of training. For example, low-level navigation and formation flying, which are critical, especially in the combat environment, which we anticipate. The main objective, then, is to provide a better pilot, a better product, rather than monetary savings. There may be in the long term some savings, but at this time we are not able to identify what savings could be realized through the program.

Mr. PATTEN. So there are advantages other than economic ones for substituting simulation for actual flying time?

Colonel BALLIF. Yes, sir, two. The first is the ability to perform maneuvers which can only be taught periodically in the air when the weather conditions are just right for certain types of flying. These situations can be simulated on the ground right down to a 100-foot ceiling or a zero-zero weather condition, in which the student pilot could be taught how to maneuver his aircraft in these conditions of flight.

Secondarily, we provide a better pilot because we are giving him a great in-depth training and other phases of training such as formation and low-level navigation, which make it easier for him to transfer to

the more sophisticated combat and support aircraft we have in the inventory today.

SCHEDULE

Mr. PATTEN. When do you expect the simulator to be procured for Reese to be delivered? What is the cost?

Colonel BALLIF. The first phase of this, which is a procurement in the 1974 Appropriations Bill, would be ready for installation in the latter part of 1974 or first part of 1975.

Mr. PATTEN. What is the cost?

Colonel BALLIF. The appropriation requested in 1974, or the fiscal year 1974 appropriation, is $5.5 million. The intent then is for each quarter from there on to procure up to the maximum requirement of 136 cockpit positions.

Mr. PATTEN. What is the estimated construction time for this facility?

Colonel RUTLAND. It will take us about 12 months.

Mr. PATTEN. What percentage reduction in flying hours do you anticipate as the result of the utilization of these facilities?

Colonel BALLIF. We don't anticipate any reduction in flying time at this time. It will be a transfer of the flying time from one phase, instrument training, into another phase, such as the formation and low-level navigation phases of training.

Mr. PATTEN. Does this mean that as far as operational facilities are concerned, you should be able to provide training for a greater number of student pilots at each training base?

Colonel BALLIF. No, sir. The number will not change. It will be the emphasis on the training which will change.

Mr. PATTEN. Are there any further questions on Reese?

Mr. DAVIS. Was this another World War II temporary or semi-temporary supply building that you are speaking of?

General REILLY. Yes, sir.

SHEPPARD AIR FORCE BASE, TEX.

Mr. PATTEN. I will ask Mr. Obey to take up the questioning on Sheppard Air Force Base.

Mr. OBEY. Insert page 91 in the record.

[The information follows:]

1. DATE | 2. DEPARTMENT: AF

FY 1974 MILITARY CONSTRUCTION PROGRAM

3. INSTALLATION: SHEPPARD AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU: AIR TRAINING COMMAND

5. INSTALLATION CONTROL NUMBER: VNVP

6. STATE/COUNTRY: TEXAS

7. STATUS: ACTIVE

8. YEAR OF INITIAL OCCUPANCY: 1941/1948

9. COUNTY (U.S.): WICHITA

10. NEAREST CITY: 3 MILES NORTH OF WICHITA FALLS, TEXAS

11. MISSION OR MAJOR FUNCTIONS

TECHNICAL TRAINING CENTER

HEALTH CARE SCIENCE SCHOOL

UNDERGRADUATE PILOT TRAINING SCHOOL (GERMAN AIR FORCE)

UNDERGRADUATE PILOT TRAINING SCHOOL (MILITARY ASSISTANCE PROGRAM)

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	907	5,120	2,503	591	8,755	15	43	0	17,934
b. PLANNED (End FY 76)	907	5,120	2,503	591	8,755	15	43	0	17,934

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	4,533	628	133,684	134,312
b. LEASES AND EASEMENTS	1,693	(8) 127	146	273
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				134,585
d. AUTHORIZATION NOT YET IN INVENTORY				5,074
e. AUTHORIZATION REQUESTED IN THIS PROGRAM (Excludes $5,383,000 Family Housing)				2,753
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				25,000
g. GRAND TOTAL (c + d + e + f)				167,412

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
171-615	Base Maintenance Training Facility I		SF	81,500	2,753	81,500	2,753
	TOTAL				2,753		2,753

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SHEPPARD AIR FORCE BASE

Sheppard Air Force Base is located 3 miles north of Wichita Falls, Tex. The base is host to the German Air Force undergraduate pilot training; military assistance program undergraduate pilot training; Technical Training Center; and the Health Care Science School. The requested program at this base is for $2,753,000 for the construction of a base maintenance training facility with a scope of 81,500 square feet. Training for certain of the trades must be conducted in inadequate substandard facilities. These facilities are too small, poorly configured, poorly lighted, widely separated, and lack environmental controls.

ATC—SHEPPARD AFB, TEX.—DESIGN COST (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Base maintenance training facility	$136,400	30

PILOT TRAINING CAPACITY AT SHEPPARD

Mr. OBEY. Will the reduction in the German pilot training program here in recent years allow the Air Force to use this as an undergraduate pilot training base?

Colonel REED. We do not intend to, as a matter of course, train U.S. pilots at Sheppard. The program was tailored and is tailored for the German Air Force. We have surged beyond the capability of our regular UPT structure and made some inputs into the Sheppard course. However, this is only projected through 1974 and as a normal course we will not use Sheppard for U.S. pilots.

Mr. NICHOLAS. Is there capacity to train U.S. pilots at Sheppard?

Colonel REED. We have the capacity to train U.S. pilots in such numbers as we require at our eight bases. We have a course structured for the U.S. program. The German program is somewhat different. We have have used Sheppard when our total requirement for pilot production exceeded our normal UPT structure.

Mr. NICHOLAS. Based upon a level of about 74 German pilots, how many U.S. pilots could be trained?

Colonel REED. I think the total is about 250, maximum production. The difference would be 175. However, bear in mind the Germans pay for their production. When we put people in we pick up portions of the cost. It may not be totally cost effective to use Sheppard for U.S. production. It is cheaper to do it on our own base.

BASE MAINTENANCE TRAINING FACILITY

Mr. OBEY. You are requesting a base maintenance training facility at a cost of $2,753,000. Will this complete the requirement for this type of training?

General REILLY. Yes, sir; this is the third and final phase to provide training facilities for our civil engineering craftsmen.

Mr. OBEY. Are you confident that your workload projections for this type of training will hold up?

General REILLY. Yes, sir.

Mr. OBEY. Provide the projected workload for the record.

[The information follows:]

PROJECTED CIVIL ENGINEERING MAINTENANCE TRAINING WORKLOAD

Programed annual production for all civil engineering training courses:

Fiscal year 1974	6,108
Fiscal year 1975	6,989

Projected annual production for civil engineering training courses to be accommodated in the facilities requested in the current program:

Fiscal year 1974	2,476
Fiscal year 1975	2,966

Specific figures for subsequent years are not available. However, it is anticipated that they will approximate those of fiscal year 1975.

Mr. OBEY. The Air Force has gradually been reducing and consolidating its bases and transferring many of them to the Reserve. Shouldn't your training requirements for Air Force base maintenance personnel also decrease?

General REILLY. Sir, at the present time we are not able to put all of our people through this specialized training. Any strength reductions we might have will simply permit us to train a greater percentage of our remaining force. Additionally our training facilities are for Reserve, civilian and military personnel and not just for the Active.

SKILLS TRANSFERABLE TO CIVILIAN JOBS

Mr. OBEY. What success have the graduates of this school had in finding civilian employment of their skills after their Air Force service?

General REILLY. Sir, I don't have any real good data on just what our men are doing after separating from the service. I do know that our men that have trained in firefighting, heating and air-conditioning, electrical and heavy equipment operations seem to go into the same work in civilian life more than some of the other skills. There is a goodly percentage of them that became journeymen in the Air Force in their respective skills and continue with the same work in civilian life. I don't have the figures. I can research that for you.

[The information follows:]

REPORT OF TRANSFERABILITY OF AIR FORCE BASE MAINTENANCE TRAINING

No specific information is available concerning the transfer of skills developed in the base maintenance training courses to civilian employment. Since December 1, 1968 the Air Force has sought to determine the transferability of all the skills it requires into civilian occupations. Extensive surveys of all personnel separating from the service have been made. Sixty days after his release from active duty each serviceman is sent a questionnaire in which he is asked to comment on whether or not his Air Force experience has helped him secure adequate employment in the civilian community. Less than 1 percent of the personnel surveyed responded. Nearly all expressed the belief that the service connected training had helped them find gainful employment. However, because of the small number of responses the survey was not considered to be valid. The survey was discontinued on May 7, 1973. Other attempts to gain the information were made through the Department of Labor. The information available was of little value because it was general in nature and the statistical data did not contain details on the individual armed service.

Through joint Air Force/civilian studies it has been estimated that about 65 percent of all Air Force developed skills are transferable to civilian jobs.

Mr. OBEY. How do you trace something like that?

General REILLY. The Air Force has a program underway.

Can anybody address our program in the Air Force in preparing our men for skills and tracking them afterwards?

Colonel REED. Project transition in the overall program is to provide marketable skills to people leaving the service. This program involves the training that we discussed at the termination of one's tour of service, and that we are relocating from Forbes to Kirtland. Here they go into a Department of Labor-run school and they learn skills such as carpentry, masonry, and so forth, if they don't have a civilian skill in the military.

Other people get counseling, and so forth. The project-transition effort is DOD-wide. There is an attempt to survey the market on the outside and find out where our people are going, what type of skills are needed and what jobs are available. It is primarily through the survey technique. Of course, it is less than 100-percent effective because when a person separates there is no control that forces him to tell you where he went to work or how to respond to questionnaires. On top of this there is superimposed a new Community College of the Air Force, which is a system to get accreditation for those courses that are being taught in the Air Force, particularly at our large technical training centers, and get recognition of these courses in both the academic community and in fulfilling requirements for apprenticeship within the unions. I think Mr. Patten has several times discussed the problems we face in these areas, and we are well aware of those. They are perhaps a twofold effort. One is working to get accreditation, acceptance of the training we give our people and work experience they gained in service, and the second is to insure they have a marketable skill when they go into the community. These two programs give us some feedback on where they go and what happens once they leave.

Mr. OBEY. Are there any questions?

Mr. PATTEN. If the gentleman would yield. Colonel Reed, after World War II we had 12 million people in the service, and when they came back, despite all your training as truck drivers and all, as they came back to our community they were really locked out. We did not do a good job for them. I struggled with it, don't think I didn't, on an organized basis. I remember one union leader said to me, "These fellows are smarter than I am. If I let them in they'll fire me in 2 or 3 years."

Truthfully, in the building trades, in the colleges, all kinds of excuses were made not to give a fellow credit for a subject. I hope that this comes under your province, that you really move into this, because I am still not satisfied we do the job today that we should in transition of the personnel. That especially goes for the credits. We don't have to go far to get an actual illustration of where you at great expense teach people courses which are college level, so they certainly should be eligible for college credit, and nothing was ever done at Princeton or Rutgers or any of the schools I know of to make it effective.

I know of cases where people are trying to qualify for different positions and if they had a few more credits they could do it. I don't think we do a good job on this and it's a shame. We don't do a job with the unions, at least in my area I don't see that at all.

We have a lot of money spent on this and committees set up with budgets. I was with a group Monday where the fellow is a chairman of the veterans employment group, and some others, and really for the jobs that are meaningful, take the operating engineers, ironworkers, electricians—you run up against a concrete wall. Even though your candidate looks better physically, mentally, he looks like a million dollars, you are fighting the system.

I hope, even with this record, if you scratch a little bit in your investigation, or others, you will be able to make a better report. The President has a big commission on employment for veterans and they have a lot of money. We gave them $25 million in one lump sum, which they just released, and we gave them large sums of money under manpower training.

I sit around the room with fellows from the American Legion and Veterans of Foreign Wars, all of whom give their time to this problem, and they are looking for the veterans who come out. In the horizontal industries we get tremendous cooperation. The other systems are just like the doctors, lawyers, undertakers, horse doctors; you have to have a State license and the whole thing is limited.

Questions?

Mr. DAVIS. I think perhaps as the record now stands it places a little too much emphasis on the idea of training people for civilian pursuits. Now that we have the volunteer armed services concept I think in order to justify spending this money it has to be on the basis of what those men are going to be able to do for the Air Force, not what they are going to be able to do after they get out. If you make it too easy for them to obtain advantageous positions in civilian life under the volunteer concept it becomes self-defeating and makes it more difficult for you to retain them to do the job that you are training them to do. I think in order to balance the record, that side of the coin ought to be laid here on the table too.

VANCE AIR FORCE BASE, OKLA.

Mr. OBEY. Turn to Vance Air Force Base.

Please insert page 93 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 19 74 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		VANCE AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	XTLF	OKLAHOMA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1941/1948	GARFIELD	THREE MILES SOUTH SOUTHWEST OF ENID, OKLAHOMA

11. MISSION OR MAJOR FUNCTIONS

UNDERGRADUATE PILOT TRAINING SCHOOL

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	331	432	147	391	0	10	11	0	1,322
b. PLANNED (End FY 76)	316	427	147	391	0	10	11	0	1,302

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	1,810	320	30,534	30,854
b. LEASES AND EASEMENTS	1,415	(2) 54	26	80
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				30,934
d. AUTHORIZATION NOT YET IN INVENTORY				0
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				371
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				7,600
g. GRAND TOTAL (c + d + e + f)				38,905

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
112-211	Taxiway 17		SY	18,625	371	18,625	371
	TOTAL				371		371

Priority

DD FORM 1 OCT 74 1390 CONGRESSIONAL

VANCE AIR FORCE BASE

The next installation, Vance Air Force Base, is located 3 miles south-southwest of Enid, Okla. Base support of an undergraduate pilot training school is its primary mission. One project for $371,000 is requested in this program.

The project, 18,625 square yards of new taxiway, provides direct access from the aircraft parking apron to the center runway. Existing conditions present a serious flight hazard since aircraft taxiing to or from the center runway must use an extension of the inside runway delaying traffic on both runways until primary mission. One project for $371,000 is requested in this program.

ATC—VANCE AFB, OKLA.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Taxiway	$33,700	95

Mr. OBEY. I note that the training you are requesting here is a relatively low priority project. Is it urgent?

General REILLY. Yes, sir, it is urgently needed. We have a three-runway complex at Vance Air Force Base and this new taxiway is a key to the more effective use of one of the runways. We have been living without the taxiway for a number of years but feel it is urgent that it be constructed.

Mr. OBEY. Can you show us on the map where it would be located and indicate how you have managed without it?

Major CORNELL. The taxiway proposed is at the north end of the parking for the operational apron, with the north end of the taxiway shown here. This will relieve a congested condition that occurs at this intersection. Aircraft must now taxi this distance down to the operational apron. There is a conflicting situation in this area here, as you can see. By putting this bypass taxiway, we will gain direct access from the operational apron to the north end of the runway.

General REILLY. That is an active runway and when aircraft are taking off and landing on the runway those aircraft taxiing down that taxiway are underneath the approaching or departing aircraft.

Mr. OBEY. How long has it been going along like that?

General REILLY. Sir, I don't know. But it has been quite a few years. What we have to do is make sure aircraft landing don't taxi that extension of the runway which is time-consuming and reduces the utilization of the aircraft.

Mr. OBEY. Vance is operated on a contract basis. Is that correct?

General REILLY. Yes, sir.

Mr. OBEY. Why? What factors led to the decision to operate this base in this manner?

General REILLY. A number of years ago—in fact back in the sixties—the Air Force decided to experiment with a base to see what advantages and economic savings could be realized, if any, with contract operation; that is, contracting for the entire base support as well as for the maintenance and upkeep of the aircraft.

Mr. OBEY. Why was Vance selected over other bases for contract operations?

Colonel BALLIF. Primarily because it was a typical undergraduate pilot training base. From the student loads it supported, because of the runway complex, and for favorable compatibility with other pilot training bases, it was used as a test case.

Additionally it was close to Enid, Okla., where civilian expertise to perform the contract tasks was readily available.

Mr. OBEY. Using your criteria for undergraduate pilot training (UPT) bases, how do you rate Vance as compared to the other UPT bases?

Colonel REED. It is one of our installations required in support of the UPT mission, and we would not feel that we would have any jeopardy in this base. It is a good base, has good airspace, and is not suffering any particular encroachment problems. We are making headway with facilities at the base. It has a three-runway complex and we consider it one of the eight good UPT bases.

Mr. OBEY. Are there questions?

SIMULATOR TRAINING

Mr. DAVIS. Getting back to this simulator training we had back here at Reese. Are you planning to put in that kind of facility at each one of your eight bases?

General REILLY. Yes, sir.

Mr. DAVIS. Is Reese the first one?

General REILLY. Reese is the lead base for the equipment; yes, sir.

Mr. DAVIS. These are expensive, and I wondered whether it is going to be necessary to put them in all of the eight bases.

General REILLY. The simulators we are using in flight training and in navigator training do take the place of hours in the air and have resulted in significant reductions in flying hours. In this particular instance, we propose to improve proficiency of the pilot in training within the allocated flying hours. A way to do that is to transfer selected phases of training now being done in the air, to the simulator and replace those flying hours with, as Colonel Ballif mentioned, formation and low-level navigation training.

Mr. OBEY. Let me follow up on that. How long has the ability to build the simulators that you are talking about been in existence?

General REILLY. This particular simulator we are talking about for the undergraduate pilot training program is a new simulator.

Mr. OBEY. By new what do you mean?

This year or last year?

Colonel BALLIF. As I mentioned before, it is within the state of the art. In other words, the capabilities exist in various other systems; DC–10 simulator, the Boeing 747 simulator run by American Airlines, and so forth, are using techniques which would be applied to the UPT aircraft. Either the T–37 or T–38 aircraft. A cockpit similar to each one of these aircraft would be mounted on one of these platforms rather than one for the Boeing 747 or one of these others. All of these various capabilities would be drawn into the simulator. It is in the design stage now. It has not actually been completed. The techniques are applied to the F–4 simulator which is being constructed now by one of the contractors for the Air Force.

Mr. PATTEN. Is there some inconsistency between this and the previous testimony by Colonel Ballif when we were talking about spending $198 million for the simulators? Will we be able to reduce the number of undergraduate pilot training bases or able to provide training for a greater number of student pilots at each of these bases?

Colonel Ballif didn't speak of any less hours in the air. From what you indicated the simulator does do something, it does do some good, and the hours spent there would reduce the hours in the air. I was under the general impression that even if we have these beautiful looking simulators they won't cause a reduction in how much time you have to have in the air or a reduction in the amount of personnel.

General REILLY. I would like to clarify again what I attempted to say. In this particular program, in the undergraduate pilot training program, these simulators do not result in training more students or in reducing flying hours. They simply are geared to provide a more proficient pilot within the hours allocated.

I made the statement that in other instances, however, simulators do permit us to accomplish things that have been or would be accomplished in the air with savings in flying hours; however, not in this particular program.

Mr. NICHOLAS. In previous years' hearings the Air Force mentioned that you planned to have a combat crew training squadron at each of the TAC bases. I gather this has never happened. It must have been planned to meet some kind of deficiency between UPT training and the actual training of personnel in the combat aircraft. Is there any connection between the more advanced training given in the simulators and the requirements to beef up the pilots' training before they get out to a unit? Aren't these two things directed to that?

General REILLY. I think Colonel Ballif indicated that because of the simulator we are able to accomplish additional training in the air. He mentioned formation flying and low-level navigation which permits the pilot to transition more readily into combat aircraft. This is something that he would normally get in training at the combat crew training center. It puts him in a position to move into the combat aircraft more rapidly. He has more experience and skill behind him as he comes out of undergraduate pilot training.

Mr. PATTEN. Did you ever see a student drive simulator automobile in a driver school? The instructors tell me the results are phenomenal. With a little bit of simulated driving—scenery passing, they get a feeling they are in motion, and they have them in the back of the garage—when you take them on the road you are way ahead.

WEBB AIR FORCE BASE, TEX.

Mr. OBEY. If there are no other questions, Webb Air Force Base.

Mr. Reporter, please insert page 95 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 19 74 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		WEBB AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	YQAZ	TEXAS

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1942/1951	HOWARD	TWO MILES SOUTHWEST OF BIG SPRINGS, TEXAS

11. MISSION OR MAJOR FUNCTIONS

UNDERGRADUATE PILOT TRAINING SCHOOL

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	386	1,418	714	343	0	6	15	0	2,882
b. PLANNED (End FY 76)	390	1,477	714	358	0	6	15	0	2,960

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	2,656	303	34,091	34,394
b. LEASES AND EASEMENTS	131	21	0	21
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				34,415
d. AUTHORIZATION NOT YET IN INVENTORY				0
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				3,154
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				4,000
g. GRAND TOTAL (c + d + e + f)				41,569

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION			TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b	Priority	c	d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
432-283	Base Cold Storage Facility	I		SF	1,700	100	1,700	100
722-211	Airmen Dormitories	I		MN	504	2,500	504	2,500
723-351	Airmen Dining Hall	I		SF	8,370	554	8,370	554
		TOTAL				3,154		3,154

DD FORM 1 OCT 74 1390 CONGRESSIONAL

Webb Air Force Base

The 10th installation, Webb Air Force Base, is situated 2 miles southwest of Big Springs, Tex. Webb's primary mission is support of an undergraduate pilot training school. Three projects totaling $3,154,000 are requested in support of the Webb mission.

Item 1 is for a 1,700 ft^2 base cold storage facility. Presently the cold storage function occupies a substandard structure, designed for less than a 10-year life, which is over 20 years old. Obsolete equipment which is excessively difficult to maintain, poor location, and deteriorated insulation qualities recommend replacement.

The second item, a 504 MN airman dormitory, will provide proper accommodations for single airmen residing on base. Airmen are now housed in substandard wood frame structures long past design life expectancy. These old structures have no wall and ceiling insulation; are inadequately lighted; are without environmental control; and furnish unsuitable living arrangements.

The last item is an airmen dining hall with a scope of 8,370 ft.^{2} An old combustible frame structure, deteriorated beyond economical repair, currently in use, has an antiquated evaporative cooling system unable to cope with prevailing summer temperatures. Noise, deteriorated condition, and unattractive appearance offer decidely inferior dining accommodations.

ATC—WEBB, TEX.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Base cold storage facility	$6,000	50
Airmen dormitories	122,000	15
Airmen dining hall	38,000	50

Enlisted barracks summary, Webb AFB, Tex.

	Men/Women [1]
Total requirement	558
Existing substandard [2]	672
Existing adequate [3]	0
Funded, not in inventory	0
Adequate assets	0
Deficiency	558
Fiscal year 1974 program	504
Barracks spaces occupied (average) March 31, 1973	510

[1] 90 square feet per man—permanent party E2–4. 135 square feet per man—permanent party E5–6. 270 square feet per man—permanent party E7–9.
[2] None upgradable.
[3] None in private housing.

Mr. Obey. How do you rate Webb according to your criteria for UPT bases?

Colonel Reed. Yes, sir. Webb has an excellent location from the standpoint of no encroachment, good airspace, and is a base on which we project continued requirements.

Mr. Obey. You wouldn't make a choice among the eight UPT bases.

Colonel Reed. I wouldn't make a choice among the eight UPT bases.

Mr. Obey. How do you rate Webb? What is the situation on offbase support for airmen here?

Colonel Shook. Offbase housing in the Webb area is primarily in the city of Big Springs, population of 28,000. There is no large civilian industry in the Big Springs area and it is primarily a low-income area with limited construction and limited offbase available housing.

From all indications, there will be no significant increase in housing construction in the foreseeable future, so we are planning to build housing on base.

Mr. OBEY. What are you currently using for airmen dormitory spaces here?

Colonel SHOOK. Wood frame buildings, 2-story, constructed in 1956 time frame, unair-conditioned, substandard facilities which need to be replaced.

Mr. OBEY. Would all of these projects complete the requirement in their respective areas?

General REILLY. With the exception of the dormitories, sir. We will still have a requirement for additional dormitory spaces.

Mr. OBEY. Are there questions?

General REILLY. I might add, for programing purposes, this will complete our dormitory requirements. I wouldn't envision we would program for the remaining deficiency.

Mr. OBEY. If there are no questions, we will take up Williams Air Force Base, Ariz.

WILLIAMS AIR FORCE BASE, ARIZ.

Insert page 99 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		WILLIAMS AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	YZJU	ARIZONA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1941	MARICOPA	THIRTEEN MILES SOUTHEAST OF MESA, ARIZONA

11. MISSION OR MAJOR FUNCTIONS

PILOT TRAINING WING

COMBAT CREW TRAINING SQUADRON (MILITARY ASSISTANCE PROGRAM)

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	490	1,728	753	445	0	18	17	0	3,451
b. PLANNED (End FY 76)	471	1,762	753	496	0	18	17	0	3,517

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	2,720	2	47,228	47,230
b. LEASES AND EASEMENTS	1,156	(12) 1	2,389	2,390
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				49,620
d. AUTHORIZATION NOT YET IN INVENTORY				1,064
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				797
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				8,200
g. GRAND TOTAL (c + d + e + f)				59,681

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
211-179	Aircraft Fuel Systems Maintenance Facility I		SF	7,200	347	7,200	347
740-236	Add to and Alter Chapel Center 35		SF	16,845	450	16,845	450
	TOTAL				797		797

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WILLIAMS AIR FORCE BASE

The last base to be considered in the Air Training Command's program is Williams Air Force Base, located 13 miles southeast of Mesa, Ariz. The base supports an Undergraduate Pilot Training School and Combat Crew Training Squadron under the military assistance program. The program requested at this base amounts to $797,000 involving two construction projects.

The first item provides an aircraft fuel systems maintenance facility. A fuel systems dock is required for effective inspection, maintenance, and repair of all components associated with the use and containment of fuels. Existing facilities cannot be economically modified to afford the required degree of safety.

The second item is to add to and alter the chapel center to replace two substandard buildings. The adequately sized, functionally arranged and environmentally regulated facilities are needed to provide a consolidated chapel center where group instruction can be provided military personnel.

ATC—WILLIAMS AFB, ARIZ.—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Aircraft fuel systems maintenance facility	$27,300	75
Add to and alter chapel center	37,200	85

Mr. OBEY. I note that the project to add to and alter the chapel center has a low prority of 35. What are you currently using?

Colonel MOORE. At Williams we have a chapel building that is just the worship center with small administrative space. There are no religious educational facilities. It is actually a chapel, multipurpose area. We are using two substandard wood frame buildings and the commander has found it necessary to condemn the second floor. Children are not allowed up there because of the condition of the building. A boiler blew up in one of them last year and we just would like to replace those.

Mr. OBEY. What other education facilities are available on this base? Are you planning to construct any additional nonreligious educational facilities here?

Colonel MOORE. There is nothing in the program through 1978 for educational facilities. The UPT training rooms are not available for classrooms. There is a public school on the base which is now being used for part of our religious educational program under the protest of the local school board. They would like us to stop that.

JOINT USE OF RELIGIOUS EDUCATION FACILITIES

Mr. OBEY. What is the Air Training Command's policy on the use of religious educational facilities for other educational programs on base?

Colonel MOORE. Their training command policy on the use of our facilities or other programs is consistent with that of the policies of the Chief of Chaplains, in that we will let any group use the building that can work around our own scheduling needs. The way it is right now, we have 11 nonchapel-related organizations using our temporary facilities. We have three other organizations asking for permission to use our facilities, but scheduling will not permit them to do so on a systematic basis.

Mr. OBEY. Provide a schedule of the proposed utilization of this facility for the record.

[The information follows:]

WILLIAMS CHAPEL—PROPOSED UTILIZATION

The proposed religious education facility at Williams AFB consists of a first floor containing kitchen, administrative office, 2 chaplain offices, 1 latrine, and a multi-purpose area 44 feet by 56 feet which with the use of movable partitions can be made into 10 classrooms. The basement area consists of 8 classrooms, 2 latrines, a religious education office, and storage areas.

Sunday morning usage involves all 18 classrooms in two sessions from 0900–1200 hours for Protestant and Catholic religious education programs. All areas will be available in the afternoon for nonchaplain-conducted denominational programs and instructional areas. Most of the building will be utilized in the evening by the 2 junior high and 2 senior high youth groups, both Protestant and Catholic.

Weekday morning usage of the basement: NCO Leadership School—6 rooms, 32 weeks a year. Daily Vacation Church School—all rooms, 4 weeks a year. BX employee training class—2 rooms, 4 weeks a year. OWC Bazaar Workshops—all rooms, 6 weeks a year. Womens Craft Classes—2 rooms, 40 weeks a year.

Afternoon useage of basement: NCO Leadership School—6 rooms, 1300–1500 hours, 32 weeks. Cub Scouts—1500 to 1700, all rooms, 3 days, 40 weeks. Brownie Scouts—1500 to 1700, all rooms, 2 days, 40 weeks.

Evening usage of basement: Little League Managers—1 room, 1900 to 2100, 1 day, 12 weeks. Girls Softball League Officials—1 room, 1900 to 2100, 1 day, 12 weeks. Catholic Adult Instructional Classes—1 room, 1930 to 2130, 1 day, 36 weeks. Protestant Adult Instructional Classes—2 rooms, 1930 to 2130, 2 days, 24 weeks. Base Youth Activity Music Classes—2 rooms, 1900 to 2100, 2 days, 40 weeks. Base Youth Activity Dancing Classes—1 room, 1900 to 2100, 2 days, 40 weeks. (Note: Over half of basement classrooms will be available each evening for use by off duty education classes or other organizations of small (10 to 20) groups.) Teacher Training Classes—2 rooms, 1930 to 2130, 1 day, 24 weeks.

Weekday morning use of multi-purpose area: Waiting wives—1 morning a month. Protestant Women of the Chapel—2 mornings a month. Catholic Women of the Chapel—2 mornings a month. Chaplain Incoming Interviews—2 mornings a week. Officers Wives Club Chorus—2 mornings a week. Altar Boy practice—Saturday mornings. Wing IG Conference period—1 day a month. Red Cross Volunteer Training Class—24 mornings a year.

Afternoon use of multi-purpose area: Girl Scouts—2 afternoons a week Children's Choirs—2 afternoons a week. Drug Abuse Awareness Council—1 afternoon a week.

Evening use of multi-purpose area: Protestant Men of the Chapel—1 evening a month. Catholic men of the chapel—1 evening a month. Alcoholic Anonymous—1 evening a week. Adult Choir rehersals—2 evenings a week. Brotherhood Meeting—1 evening a week. Airman Coffee House—1 evening a week. Christian Laymens Fellowship—1 evening a week. (Note: Saturday afternoons and evenings are kept clear for cleaning and preparation for Sunday religious education classes.)

Mr. OBEY. Are there questions?

Mr. LONG. Colonel, are there any court suits pending on the matter of chapels and provision by the Armed Services of facilities for religious education?

Colonel MOORE. Not that I know of.

Mr. LONG. I thonght there were.

Mr. RIETMAN. Are you talking about compulsory attendance?

Mr. LONG. No; suits that would affect the building of chapels. In other words, I am raising the question, are we proposing here or providing money for the building of chapels which might be thrown out if the courts should decide the Armed Services have no business providing chapels or paying chaplains as a result of some future court order.

I want to make clear for the record I am not questioning this; I am a great believer in religion and provision for it. But, we don't want

to waste money if the court should decide this is not a function of the Armed Services.

Colonel MOORE. I know of no such suits pending.

Mr. LONG. Do you know of any?

Mr. RIETMAN. No; I don't.

Mr. LONG. Perhaps you could for the record have some research done on this and find out whether there are. I would be surprised if there were not some suits pending. I think this has been raised by people all over the place. Please investigate that.

General REILLY. Yes, sir.

Mr. LONG. I think it is improbable that they would do this, but we are entitled to know.

General REILLY. Chaplain Moore is from the Chief Chaplain's Office and we will research this.

[The information follows:]

COURT SUITS RESTRICTING CONSTRUCTION OF RELIGIOUS FACILITIES

Consultation with the Office of the General Counsel Department of the Air Force confirms that there is no history of court suits, nor are there any pending regarding construction of religious facilities on military installations or the provision by the armed services for religious education.

LOWRY AIR FORCE BASE, COLO.

Mr. PATTEN. Let us go back to the questions on Lowry Air Force Base.

We were waiting for you, Dr. Long, to get this briefing on the Accounting and Finance Center complex.

Insert page 80 in the record.

[The information follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		LOWRY AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR TRAINING COMMAND	NTMU	COLORADO

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1938	DENVER	ONE MILE SOUTHWEST OF DENVER, COLORADO

11. MISSION OR MAJOR FUNCTIONS

TECHNICAL TRAINING CENTER

SPECIAL TRAINING GROUP

AIR FORCE ACCOUNTING AND FINANCE CENTER

12. PERSONNEL STRENGTH

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	449	3,369	1,722	639	5,174	50	28	0	11,431
b. PLANNED (End FY 76)	592	4,056	4,342	639	5,174	50	28	0	14,881

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	6,769	329	87,477	87,806
b. LEASES AND EASEMENTS	50 (1)	0	0	0
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				87,806
d. AUTHORIZATION NOT YET IN INVENTORY (Excludes $7,376,000 Family Housing)				987
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				21,610
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				18,000
g. GRAND TOTAL (c + d + e + f)				128,403

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE Priority b	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
610-284	Air Force Accounting and Finance Center I	AFFC	SF	601,375	20,350	601,375	20,350
740-612	Airmen Open Mess 34		SF	26,300	1,260	26,300	1,260
	TOTAL				21,610		21,610

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CONGRESSIONAL

LOWRY AIR FORCE BASE

Lowry Air Force Base, located 1 mile southeast of Denver, Colo., has a technical training center as its primary mission. The program for this base contains a request for $21,610,000 for two projects as follows:

The first item is for the Air Force Accounting and Finance Center with a scope of 601,375 square feet. Currently the center is in old, deteriorated buildings located in a congested area of Denver. Type of construction, building age, inadequate fire protection, limited security, and separated locations severely limit the entire function.

The last item will provide construction of an airmen open mess with a scope of 26,300 square feet. Airmen open mess activities are currently housed in an over 30-year-old structure, designed for less than a 10-year service life. Substandard and nonfunctional facilities make it an impossibility to provide adequate club services.

ATC—LOWRY AFB, COLO—DESIGN INFORMATION (DESIGN COST ESTIMATED)

Project	Design cost	Percent complete, July 31, 1973
Air Force accounting and finance center	$985,000	45
Airmen open mess	20,700	50

AIR FORCE ACCOUNTING AND FINANCE CENTER

Mr. PATTEN. You are requesting $20,350,000 for a new facility for the Air Force Accounting and Finance Center. What is the mission of this center?

General REILLY. Mr. Chairman, because of the importance and magnitude of this project we respectfully request we be permitted to give a short briefing on the requirement. We have with us Colonel Spuhler, Chief of Plans and Programs from the Finance Center.

Colonel SPUHLER. Mr. Chairman and gentlemen, I would like to provide the committee with a short briefing on our project in 1974 MCP to build a new accounting and finance center on Lowry Air Force Base.

My briefing will include an overview of the mission of the organizations of the center, our mission support requirements, problems, and our proposed solution. It would be appropriate at the outset of this briefing to acquaint the committee with the functions and responsibilities of the center. First from an accounting standpoint, we are responsible and perform all accounting and reporting tasks for the Air Force. Accounting for collections and disbursements of the Air Force requires the receipt, validation, and processing of the large number of transactions you see depicted on this chart. Furthermore, we account for the total Air Force appropriation. By way of relating to the seat of the Government, the consolidated financial reports we prepare at the center are forwarded quarterly to the congressional Appropriations Committee. As was the case with accounting operations, we have learned that maximum economy can be realized by centralization of our financial and pay activities.

By June of 1974, the pay accounts for all active-duty Air Force personnel will be centralized on the computers at the Air Force Accounting Finance Center. This action will complete our centralization cycle and include active military pay accounts with other ongoing and highly successful centralized financial operations, such as allotments, leave accounting, pay of Air Guard and Air Force Reserve personnel, and pay of all retired Air Force members.

Closely associated with these activities are those of our major tenant, Air Reserve Personnel Center. By virtue of the interrelationship between financial and other personnel management actions affecting reservists, the logic of colocation of these activities has been proven over the years.

The Air Reserve Personnel Center administers and manages the military affairs of nearly one-half million Air National Guard and Air Force Reserve. Their most important function is mobilization. All operations are aimed at providing a qualified force when needed. The Reserve Center takes a reservist all the way from his original appointment through assignments, through his training, promotion, classification, accounting for his retirement plans, and ultimately they retire or they discharge him.

My remarks concerning missions were confined to the major areas of accounting, finance, and Reserve personnel administration. It is important to note they all have one similarity: they are worldwide.

From an accounting and finance standpoint, we exercise technical supervision over the entire accounting finance network of 155 individual offices. The Air Reserve Personnel Center is assigned the same degree of responsibility for administration of Reserve personnel.

ACCOUNTING AND FINANCE CENTER WORK FORCE

Deeply involved in the functional areas of responsibility is the work force of 3,138 people who are housed in a large physical plant. The present work force is highlighted by the fact that two-thirds of the civilians are female employees serving in clerical positions, 26 percent of our civilian force come from minority groups, and 16 percent are handicapped. The vast majority of our female employees provide a secondary income source to their families. These facts make it a certainty that a large percentage of this skilled and unique work force would be lost if the center complex and its tenants were moved from the Denver area. The effective accomplishment of the complex center functions rest primarily on the interdependency of the three factors shown. We must have a readily available work force trainable in white-collar skills and willing to work in clerical-type positions. The facility to house our operations should be configured for administrative use with adequate communications, computer support, and in a controlled environment.

Finally, the facility should be located to take maximum advantage of the established close base support.

As indirect requirements, the facility must be located in close proximity to major air and rail terminals and major post offices.

PRESENT FACILITIES

Let us examine the problem. This overlay graphically displays the problems we have faced. Our substandard facilities, coupled with recent dramatic changes in missions, make the continuance of operation under current conditions unacceptable.

Centralization and computerization of pay, accounting, and Reserve personnel administrative operations impose certain unique requirements for mission support that are not available at the present site.

[New chart.] This is an aerial view of a GSA-controlled facility we currently occupy. As a matter of background, these facilities are

located in downtown Denver at 3800 York Street. They were acquired by the War Department in 1942, and they were built for use as U.S. Army medical warehouses.

The 38-acre site is bordered by industrial complexes on two sides and by residential areas on the other two sides.

[Chart.] The buildings were actually constructed with a life expectancy of less than 15 years. As these pictures depict, the supporting beams, the rafters, and the joists are dried out, splitting, and are in generally poor condition.

[Chart.] In this one building, deterioration and snow loads have caused supporting beams to crack and the roof to sag. The entire building has been shored with temporary supports.

[Chart.] As noted here, the original configuration of the buildings as warehouses limits their efficient use as administrative space. The results are congested working conditions, poor lighting, and inadequate security.

Further, the buildings are not air-conditioned.

[Chart.] These conditions are compounded by the proximity of the surrounding residential and industrial areas. The buildings are highly combustible and present a serious fire hazard.

Further, there is no available land for expansion.

[Chart.] As stated at the beginning of the briefing, we will now review the approaches we undertook to correct this problem. It is important to note that these evaluations have been conducted by the Air Force over the past several years. First, we considered improvements to the existing facilities. Improving the existing facility would achieve only surface covering to most of the physical deficiencies we have discussed.

Basic structural limitations with the attendant undesirable working conditions cannot be rectified without total reconstruction. We would still be faced with a lack of land for expansion. Therefore, the estimate of nearly $10 million to improve the present facility is not recommended.

PROBLEMS WITH RELOCATION OUT OF DENVER AREA

Second, moving to a Government facility outside the Denver area involved detailed staff review of several specific locations. The review assumed the existence of an adequately sized facility, and therefore we costed only the necessary costs for modification, costs to relocate personnel, recruiting and training costs, severance payments, and the impact such a move would have in disrupting our pay and accounting service for all Air Force personnel and their dependents.

The third action was to weigh and compare the alternatives against the construction of a new facility in the Denver area, which would provide adequate facilities and have the added advantage of (*a*) no disruption to the mission, (*b*) be of comparable cost, and (*c*) have minimum impact on the existing work force.

[Chart] This led us to this solution. The certain loss of the skilled work force, the time-consuming recruiting and training program involved, and an economic analysis of all the approaches led us to conclude that construction of a new facility at Lowry Air Force Base of 600,000 square feet at a cost of $20 million would be the most practical of all the alternatives considered.

[Map] As this Denver area map shows, the relocation would be across town from the present location at 3800 York Street to Lowry Air Force Base, a distance of approximately 6 miles.

This solution would insure the retention of our work force, would be the least disruptive to our operations, and it would provide an efficient facility with the necessary operating environment for the foreseeable future.

Finally, economies can be realized by use of established base support at Lowry.

Mr. Chairman, I thank you for the opportunity and time to present this briefing.

COMPARISON WITH OTHER GOVERNMENT AND PRIVATE FACILITIES

Mr. PATTEN. Well, very interesting, but it was pretty general. I still don't know what you are going to build.

I would like to call to your attention the fact that Prudential collects over $10 million a day. They have millions of policyholders. They take in a lot of money and they pay out a lot of checks. They are building a new center to do what you have to do.

The Social Security people have to send out millions of checks. Your Air Force personnel are nothing compared to Social Security. They will reach 44 million people and their computer centers, their accounting centers, and finance centers that they are building now, they feel, are the ultimate in efficiency and construction for matters related to the job you have to do.

Also, we hear from Internal Revenue. Today you mail a check to Internal Revenue and you mail it out to the woods someplace. They are not down in the center of town. They have their new complexes where you can park and the employees can come in and out quicker than when they were downtown.

So that a lot of what you are about to do has been done and I would hate to think that you were not familiar with what the Army does at Fort Harrison, which we call their bank or what these other large groups are doing. I want to make sure you really come up with something that will be all you hope it will be, what you say it will be. I would like to feel that those responsible at least were acquainted with some of these other new facilities.

Of course, in your briefing you didn't tell us what research was done. But we have spent billions of dollars in these types of facilities and I hope you get what you want and don't have to learn the hard way.

Are there any questions on my right?

ECONOMIC EVALUATION

Mr. LONG. General, when you figure out what the costs of repairs are, and, of course, repairs and operating expenses are heavy in these old facilities—we all know that—do you compare this with the cost of building a new facility, depreciation on it, the interest on the money, in deciding whether you are going to build a new facility or fix up the old one?

General REILLY. Yes, sir; we certainly do. If I may elaborate just a little on the existing situation, the facility is now owned by the General Services Administration which has been furnishing it to the Air Force at no cost for a number of years. We are faced with two things:

First, the requirement to improve the facilities and, second, based upon a law passed in 1972 the services will soon be charged by the General Services Administration based upon rates they establish which are more or less the current rates, so we are faced, even in occupying existing facilities, with incurring several millions of dollars a year of expense, but whatever is done to this old facility, I trust we made the point that we just can't get it up to acceptable standards for long-term use. At Lowry Air Force Base we have the space for parking, which is a major advantage. We have available the remainder of an old airfield which permits us to take advantage of a mass parking apron for all of our vehicular parking. We can amortize this project, through avoidance of the heavy repairs that are required for the existing facility, and the avoidance of paying rent each year.

Mr. LONG. Are you merely looking at it from the standpoint of the Air Force versus GSA or are you looking at it from the standpoint of the taxpayer?

General REILLY. I think we are looking at it from the standpoint of the taxpayer.

Mr. LONG. I would like to see a systematic comparison based on approved methods such as those which take into account depreciation and interest on the money.

You could be perfectly justified in what you say in this particular case. You make it sound pretty bad. But I am getting rather tired of being presented again and again and again with requests for new buildings from the military, with the statement that it costs too much to operate the old one, without being given any comparison between the high cost of operation, or the savings that you are going to get on operations, let us say, from the new facility and what it costs to build it—depreciation, the interest, and such.

General REILLY. Yes, sir.

Mr. LONG. Do you conduct that type of analysis?

General REILLY. Yes, sir, and we can certainly provide it.

Mr. LONG. I think that should be provided for the record, not only in this but in other projects which you are proposing to build, so we can really come to grips with it. Do you understand what I mean?

General REILLY. Yes, sir, I certainly do.

[The information follows:]

ECONOMIC ANALYSIS FOR FINANCE CENTER

An economic analysis is required for all Department of Defense investments prior to the decision to submit a project for approval. These analyses are covered under the guidance of Air Force Regulation 172–2, Department of Defense Instruction 7041.3 and applicable Office of Management and Budget Circulars, and include depreciation, interest rates, et cetera.

The analysis for the finance center is submitted as an example of an analysis prepared for Air Force projects.

We have previously supplied the committee staff with detailed economic analysis for Depot Modernization Program projects.

[See pages 375–380 for analysis.]

SQUARE FOOT PER PERSON

Mr. LONG. This, I notice, is 600,000 square feet. It is about 15 acres, the size, really, of a small farm. That is tremendous acreage for a building. Only 3,000 people work there?

General REILLY. Between 3,100 and 3,200 people.

Mr. LONG. That means what? Two hundred square feet a person?

General REILLY. Yes, sir, and again consistent with Mr. Patten's comments, it incorporates a large amount of automatic data processing equipment. The large computer complex will occupy a major portion of the ground floor of this facility and they are going into all of the modern techniques.

Now, the scope of this facility takes into account the reductions in space requirement that we are achieving through miniaturizing the personnel files and the financial files of all of our millions of people.

Mr. LONG. When you build a commercial operation, like one of these insurance companies that Mr. Patten very cogently compared this with, have you compared what square footage they use to see whether we are not calling for a lot more square footage than is needed? It seems to be enormous square footage to me for 3,000 people.

General REILLY. Colonel Spuhler, would you address the planning that has gone into this?

Colonel SPUHLER. The square footage per person works out actually to 125 gross per individual.

Mr. LONG. Just divide 3,000 into 600,000. I am a very simple fellow. That to me comes out to 200 square feet.

Colonel SPUHLER. It does, yes, sir, Dr. Long. However, when you drop out all of the special space, 30,000 square feet of computer space——

Mr. LONG. I understand all that; but where you have computers, then you don't need people, so there should be some savings. It doesn't seem to me that computer space is just dead space and, therefore, should necessarily require extra space.

Colonel SPUHLER. No, sir, we considered the people. As an example, we have shift work in our computer operations. We considered the maximum number of people in the building at any one time for our space requirement.

Mr. LONG. That is another question you just raised which is very interesting to me. Is this around the clock?

Colonel SPUHLER. Yes, sir.

Mr. LONG. How many people are on duty at any one time?

Colonel SPUHLER. There are roughly 100 people on the two off-normal shifts that would be operating in this.

Mr. LONG. Oh, so this would be 2,800 during the daytime shift?

Colonel SPUHLER. Yes, sir. Therefore, these are the kinds of considerations we put into it, however, to arrive at our square foot per person. There is a large amount of administrative storage space in this building. It is required by law, I might add, that we retain military pay records for a 7-year period after an individual retires, so all of these hard copy pay records are in storage there.

Mr. LONG. Could you, to carry out some of the interesting suggestions of Congressman Patten, give us a comparison between the square footage and so on of this facility you are proposing to build and what the Army uses, what the Prudential Insurance Co. uses or any other insurance company that is building these things?

Colonel SPUHLER. Yes, sir.

Mr. LONG. I think we certainly don't want the military to be using a lot more space than commercial operations do unless there is a good reason for that. That could be put into the record?

General REILLY. Yes, sir.

[The information follows:]

DENVER FINANCE CENTER SPACE COMPARISON WITH INSURANCE COMPANIES

The scope of 601,375 square feet for the new AFAFC facility was computed on the basis of 3,138 personnel occupying the building. The following information was obtained for comparative purposes.

The U.S. Army Finance Center building, located on Fort Benjamin Harrison, Ind., comprises a total of 1,570,000 square feet and houses approximately 3,730 personnel. Included in this facility is the U.S. Army Finance Support Agency, which is an organization similar to the Air Force Accounting and Finance Center. The Finance Support Agency has 2,850 personnel assigned, utilizing 747,000 square feet of the finance center building.

The Safeco Insurance Co. completed and occupied new divisional facilities in the Denver area in late May 1973. This company determines total space requirements in a conventional manner by first computing special and common area requirements such as courtyards, cafeterias, reception areas, aisles, corridors, mechanical equipment rooms, et cetera. Net residual administrative space is then allocated to the various administrative functions based on company standards. The average allocation for administrative space is 150 square feet per building occupant. (Compared to 125 square feet per occupant for the requested project.)

A further contact was made with the Prudential Insurance Co., Newark, N.J. They advised that they generally use a planning factor of 200 gross square feet per building occupant in facilities such as this where large numbers of clerical and administrative personnel are the basic work force. (Compared to Air Force gross allowable of 162 square feet.)

As the comparative statistical data clearly indicates, the space requested for the Air Force Accounting and Finance Center is well below the amount being utilized by the Army and the standards used by the commercial insurance companies indicated.

Mr. LONG. Those are all the questions I have.

Mr. PATTEN. I have just a few questions for the sake of the record.

I would say if a hundred of us went out and we took a look and listened to your story we would all be in favor of getting out of these old buildings out in Denver and going ahead and putting you in business in an adequate facility.

I mean we wouldn't disagree on that. From your viewpoint this must be beautiful. You must be looking forward to this, and I want you to have the best and not get it wrong because you didn't look around enough.

STUDIES

I hope that for the record, and you said you would do it at Congressman Long's request, that you will supply the total cost and the savings which are connected with this move, and the economic analysis, of course, of the savings, and the effect on morale and retention of your employees, and those little things that can be embellished for the record because we have to sell this on the floor.

How thoroughly have you examined the possibility of moving out of Denver in order to utilize existing facilities elsewhere, other than the Denver area, like Fort Holabird, Md. They have a lot of empty buildings over there, haven't they?

Mr. LONG. They certainly do.

Mr. PATTEN. What would be the cost of any alternatives?

General REILLY. Mr. Chairman, we can provide that for you. We looked real hard at other installations both in and out of the Air Force. First, we find that there are no consolidated facilities or single facilities where we can consolidate all the activities we are speaking of. I think we can furnish to you the studies we have made, and locations, and costs

associated with such potential moves as opposed to the new facility at Lowry.

[The information follows:]

STUDIES, LOCATIONS AND COSTS/DENVER FINANCE FACILITY

Studies have been made for several years on the relocation of the center. Specific evaluations involved collocation of the Air Force personnel and finance centers, which included Lowry AFB, Colo., Randolph AFB, Tex., Patrick AFB, Fla., and Air Force plant No. 4, Texas, as potential locations. Another evaluation considered relocation to any Government owned facility, with an assumption, for costing purposes, that the move would be at least 1,000 miles distance.

In all cases, the most critical factor mitigating against moving AFAFC and its tenants from the Denver area has been the certain loss of approximately 60 percent of the highly skilled and experienced technical and professional personnel. A move outside the Denver area would involve a costly hiring overlap, a time consuming and costly recruiting and training program and the certain degradation of service which would be virtually irreparable to the Air Force.

These evaluations and the supporting economic analysis brought us to the conclusion that it is more cost effective and more practical to relocate to Lowry AFB rather than to consider a geographical relocation.

ACCOUNTING AND FINANCE FACILITY—ECONOMIC ANALYSIS, LOWRY AIR FORCE BASE

1. The economic analysis on this project has been completed in accordance with AFR–172–2, "Economic Analysis of Proposed DOD Investments"; and OMB circular No. A–104, "Comparative cost analysis for decisions to lease or purchase general purpose real property," dated June 14, 1972. Four alternatives were considered:

(*a*) Renovate and secure the existing facility;
(*b*) Construct new facility on Lowry Air Force Base;
(*c*) Lease facility in Denver area; and
(*d*) Existing facility at another Air Force installation.

2. Under alternative "(*a*)" it would cost about $9,130,000 to renovate and provide additional security for the existing facility (see page 27). However, overcrowded working conditions would continue and thus we would not attain the benefit of 2 percent increased productivity provided by the other alternatives.

3. The cost and benefits of alternatives "(*b*)," "(*c*)," and "(*d*)" as documented on the following pages led us to conclude that the construction of a new facility on Lowry Air Force Base would be in the best interest of the Government.

Renovate and secure existing facility

1-time cost estimate as provided by GSA to modernize existing facility $9,130,000

The expenditure of the above funds would provide a suitable facility for AFAFC and tenant organizations. However, it would still be a 30-year-old facility with attendant higher maintenance costs. Also, it would not overcome the many operational limitations inherent in the physical layout of the buildings.

Present value of cost savings from operations $30,023,638

Savings/investment ratio, 13.28:1.

Present value cost summary for purchase of Lowry facility versus modernization of present facility

Present value of new investment:	
Building (land presently owned)	$20,350,000
Repair and improvement discounted over 20 years	1,430,000
Subtotal	21,780,000
Less residual value	4,581,000
Total	17,199,000
Less present value of assets replaced	8,600,000
Net investment	8,599,000

Present value cost summary for purchase of Lowry facility versus modernization of present facility

Cost of moving:	
Office equipment	$212,000
Records	29,000
ADPE	8,000
Total	249,000
Net investment	8,848,000
Present value of cost savings from operations (see p. 379)	30,023,638

Savings/investment ratio, 3.39:1.

Present value cost summary for lease of Lowry facility versus modernization of present facility

Lease:	
Total annual payments	$42,830,096
Less present value of assets replaced	8,600,000
Net lease annual payments	34,230,096
Present value of cost savings from operation (see p. 379)	30,023,638

Savings/investment ratio, 0.87:1.

Lease/purchase: Due to the high cost of leasing office space in the Denver area, as outlined under the "lease" alternative, a lease/purchase alternative would also be excessive in cost. Consequently, no such alternative has been priced out.

Present value cost summary for another Air Force installation versus modernization of present facility

It is assumed that an existing facility at another base would be equal to that constructed at Lowry AFB.

It is also assumed that some modification would be required to accommodate the computer, communication services, etc.

Cost estimates

Modification cost for another Air Force installation	$4,500,000
Relocate work force:	
90 officers ($1,358 each PCS)	122,220
385 airmen ($494 each PCS)	190,190
1,154 civilians (40 percent of 2,885 times $4,000 PCS)	4,616,000
Total for relocating work force	4,928,000
Repair and improvement discounted over 20 years	1,430,000
Severence pay 400 times $3,500: (estimated 400 civilians would not move, retire or find other Federal work)	1,400,000
Recruiting and training cost: (total civilian work force 2,885, estimate 60 percent will not relocate—1,731. Average recruitment and training cost $5,000 each), $5,000 times 1,731 equals	8,655,000
Cost of moving:	
Office equipment	404,000
Records	262,000
ADPE	8,000
Total cost of moving	674,000
Total 1 time costs	21,587,000
Less (present value of assets replaced)	8,600,000
Net investment	12,987,000

Present value of cost saving from operations (p. 379), $30,023,638; savings/investment ratio, 2.31:1.

PRESENT VALUE PURCHASE COST CALCULATIONS

PURCHASE ALTERNATIVE

Project year	Constant dollars				Present value				
	New facility	Repair and improvement	Property tax	Residual value	7 percent discount	New facility	Repair and improvement	Property tax	Residual value
0	$22,811,000 [1]				1.000	$22,811,000			
1		$75,000	$59,000		.935		70,125	$55,165	
2		75,000	59,000		.873		65,475	51,507	
3		75,000	59,000		.816		61,200	48,144	
4		75,000	59,000		.763		57,225	45,017	
5		75,000	59,000		.713		53,475	42,067	
6		120,000	59,000		.666		79,920	39,294	
7		120,000	59,000		.623		74,760	36,757	
8		120,000	59,000		.582		69,840	34,338	
9		120,000	59,000		.544		65,280	32,096	
10		120,000	59,000		.508		60,960	29,972	
11		216,000	59,000		.475		102,600	28,025	
12		216,000	59,000		.444		95,904	26,196	
13		216,000	59,000		.415		89,640	24,485	
14		216,000	59,000		.388		83,808	22,892	
15		216,000	59,000		.362		78,192	21,358	
16		216,000	59,000		.339		73,224	20,001	
17		216,000	59,000		.317		68,472	18,703	
18		216,000	59,000		.296		63,936	17,464	
19		216,000	59,000		.277		59,832	16,343	
20		216,000	59,000	[2] $17,756,813	.258		55,728	15,222	$4,581,258
Total present value						22,811,000	1,429,596	625,046	4,581,258

[1] Construction cost of $20,350,000 and site cost of $2,461,000 (46.5 acres) are assumed to be paid at the start of year 1. All other costs shown assume payment at the end of the year specified.

[2] This figure represents the remaining value of the building which declines at 1.7 percent per year ($14,442,191) and the remaining value of the site which appreciates at 1.5 percent per year ($3,314,-622).

PURCHASE ALTERNATIVE: BUILDING DECAY—OBSOLESCENCE AND SITE APPRECIATION [1]

	Building decay-obsolescence factor ($20,350,000) [2]	Site appreciation factor ($2,461,000) [3]
Project year:		
1	0.98300	1.01500
2	.96629	1.03023
3	.94986	1.04568
4	.93371	1.06136
5	.91784	1.07728
6	.90224	1.09344
7	.88690	1.10984
8	.87182	1.12649
9	.85700	1.14339
10	.84243	1.16054
11	.82811	1.17795
12	.81403	1.19562
13	.80019	1.21355
14	.78659	1.23176
15	.77322	1.25027
16	.76007	1.26899
17	.74715	1.28802
18	.73445	1.30734
19	.72197	1.32695
20	.70969	1.34686

[1] Based on an estimated economic life of 20 years.
[2] Based on a depreciation rate of 1.7 percent per year. Remaining value, $14,442,191.
[3] Based on an appreciation rate of 1.5 percent per year. Remaining value, $3,314,622.

Note: Total residual value, $17,756,813.

LEASE ALTERNATIVE

Objective: To determine the present value constant dollar annual payment for a leased facility.

Assumptions: Initial acquisition January 1, 1975; initial period of level payments, 20 years; the annual payment will be $4,811,000 for 601,375 new square feet,[1] the payments will be made at the end of the year.

Other factors: 2.2 percent constant dollar price deflator was used; 7 percent value discount factor was used.

Year	Current dollar payment	Current dollar price deflator at 2.2 percent	Constant dollar payment	7 percent present value discount factor	Present value
1	$4,811,000	0.978	$4,705,158	0.935	$4,399,323
2		.957	4,604,127	.873	4,019,403
3		.937	4,507,907	.816	3,678,452
4		.917	4,411,687	.763	3,366,117
5		.897	4,315,467	.713	3,076,928
6		.878	4,224,058	.666	2,813,223
7		.859	4,132,649	.623	2,574,640
8		.840	4,041,240	.582	2,352,002
9		.822	3,954,642	.544	2,151,325
10		.804	3,868,044	.508	1,964,966
11		.787	3,786,257	.475	1,798,472
12		.770	3,704,470	.444	1,644,785
13		.754	3,627,494	.415	1,505,410
14		.737	3,545,707	.388	1,375,734
15		.722	3,473,542	.362	1,257,422
16		.706	3,396,566	.339	1,151,436
17		.691	3,324,401	.317	1,053,835
18		.676	3,252,236	.296	962,662
19		.661	3,180,071	.277	880,880
20		.647	3,112,717	.258	803,081
Total annual lease payments					42,830,096

[1] 601 375 ft² times $8.00 per square foot equals $4,811,000 per year. Based on GSA bulletin FPMRD—93, June 28, 1972, which identifies $8 per square foot for leasing office space in the Denver area.

EXPLANATION OF SOURCE/DERIVATION OF ESTIMATED PRESENT VALUE OF SAVINGS O. & M.

	Present[1] facility minus	New facility (Lowry) plus	Repair present facility plus	Increased[2] productivity plus	Reduced[3] manpower require-ments plus	Differential cost	7 percent discount factor	Discounted differential cost
Project year:								
1	$910, 728	$771, 396	$9, 130, 000[4]	$790, 922	$956, 000	$11, 016, 000	0. 935	$10, 299, 960
2	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 873	1, 782, 666
3	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 816	1, 666, 272
4	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 763	1, 558, 046
5	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 713	1, 455, 946
6	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 666	1, 359, 972
7	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 623	1, 272, 166
7	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 582	1, 188, 444
9	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 544	1, 110, 848
10	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 508	1, 037, 336
11	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 475	969, 950
12	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 444	906, 648
13	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 415	847, 430
14	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 388	792, 296
15	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 362	739, 204
16	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 339	692, 238
17	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 317	647, 314
18	910, 728	771, 396	156, 000	790, 922	956, 000	2, 042, 000	. 296	604, 432
19	910, 728	771, 396	165, 000	790, 922	956, 000	2, 042, 000	. 277	565, 634
20	910, 728	771, 396	156, 000	790, 922	956, 030	2, 042, 000	. 258	526, 836
Present value of savings								30, 023, 368

[1] Includes $31,000 annual lease of storage space from Rocky Mountain Arsenal.
[2] See following page for explanation.
[3] Due to merging of some support functions 78 manpower spaces can be saved from the following areas: 10 Comm. Sq., 43 GSA, 25 AFAFC.
[4] GSA estimated cost to modernize existing facilities to bring them up to an acceptable standard for long-time retention. Improvements would include replacing roof coverings, installing fire detection system, expanding air-conditioning, perimeter security system, and installing backup power system.

INCREASED PRODUCTIVITY

Research in the area of increased productivity indicates that there are 10 factors which significantly influence work efficiency.[1] One of these is work environment. Decreased effectiveness of the personnel working in the existing (30-year-old) AFAFC complex is attributed to overcrowded working areas and substandard facilities. These conditions result in a decrease in productivity of over 2 percent. With a workforce of 2,885 civilians at an average annual cost of $12,255; and 475 military at an average annual cost of $8,822 (AFM 172-3)); the savings to be realized through increased productivity will be:

	Man-years	Average annual salary	Annual cost
Civilian	2,885	$12,255	$35,355,675
Military	475	8,822	4,190,450
Total			39,546,125
Multiply by			X.02
Savings due to increased productivity			790,922

Mr. PATTEN. Speaking of our new cost, no one put in the record what will be the sale price of this acreage down there in the heart of Denver. Just for residential purposes this is going to be quite an item, running into millions of dollars, undoubtedly.

PERSONNEL LEVELS

How many people did you say are involved in the move?

General REILLY. 3,138, I think, was the figure.

Mr. PATTEN. What has been the manning of this center for the past 5 years?

General REILLY. Colonel Spuhler.

Colonel SPUHLER. The manning of the center has remained relatively stable during the past 5 years, but I think it is important to understand that we have assumed a tremendous amount of additional workload by virtue of our centralized activities that we have brought into Denver, that we have removed from the field.

I don't have the numbers right offhand, but we have realized substantial savings on our individual accounting and finance offices in the field as a result of our centralized activities.

Mr. PATTEN. Have there been reductions in personnel as a result of the increased computer usage?

Colonel SPUHLER. Yes, sir, principally in the field.

Mr. PATTEN. Are you anticipating this trend will continue?

Colonel SPUHLER. Yes, sir. As a matter of fact, just at the center alone, I anticipate we will reduce approximately 300 spaces from now until the time we get into the new facility.

Mr. PATTEN. Incidentally, in this connection, this new Postal Corporation is going to spend billions of dollars in putting the most modern methods into running the post office which has 770,000 employees. They had a study on that and they went to great lengths, had

[1] "Motivation to Work," by Herzberg, Mausner & Schneiderman. Copyright John Wiley & Sons, New York, 1959. "Work and the Nature of Man," by Frederick Herzberg, published by the World Publishing Co., 1971.

some of the finest men in industry, large industries, insurance companies and the like, help make their study, and they see tremendous savings, not to speak of getting the job done, if they move forward. What we are talking about is similar to what you want to do.

Have you designed the facility to reflect your expectation in this regard, namely, that you may have less personnel as you go into modern business machinery and equipment?

Colonel SPUHLER. Yes, sir. The number of people the facility is being designed for is 3,138, which is our anticipated strength in the fourth quarter of fiscal 1976.

Mr. PATTEN. Can you provide for the record a breakdown of the spaces requested?

General REILLY. Yes, sir.

[The information follows:]

SPACES REQUESTED AT FINANCE CENTER

The following chart reflects the methodology utilized to determine total space required for the new facility

	Manpower assigned	Square footage
Special area:		
Computer area	118	43,900
Cafeteria	17	27,000
Records storage	61	53,100
File bank	40	19,500
Employee services	11	5,750
Reproduction	28	10,450
Mail	25	9,000
Library	5	6,600
Communications center	41	3,150
Microform service center	6	3,675
Checks/bonds area	17	3,900
Total	369	186,025
Administrative area:		
Total building population	3,138	
Less: Manpower in special area	−369	
Total	2,769	[1] 346,125
Common use area:		
Stairs, elevators, walls, mechanical equipment room		69,225
Grand total	3,138	601,375

[1] 2,769 times 125 ft² per person.

Mr. PATTEN. Will the transfer of these functions to Lowry have an adverse impact on the bachelor or family housing situation at Lowry?

General REILLY. No, sir, it won't. Lowry is presently supporting the military personnel at the center and there will be no change.

OUT-YEAR CONSTRUCTION AT LOWRY

Mr. PATTEN. Provide for the record a listing of the out-year construction programs at Lowry.

General REILLY. Yes, sir.

[The information follows:]

OUTYEAR CONSTRUCTION, LOWRY AFB

THE PROPOSED OUTYEAR CONSTRUCTION FOR LOWRY AFB

MCP year	Item	Scope	Amount (thousands)
Fiscal year:			
1975	Service club	[1] 27,800	$811
	General training	[1] 50,000	1,450
Fiscal year 1975 total			2,261
1976	Composite airmen dormitory	[2] 1,000	6,600
Fiscal year 1976 total			6,600
1977	Air condition officers quarters	[2] 104	208
	Base engineer maintenance complex	[1] 61,640	1,803
	Dental clinic addition/alter	[1] 9,000	588
	Chapel center	[1] 19,000	760
	Library	[1] 10,300	375
	Alter airmen dormitories	[2] 402	1,206
Fiscal year 1977 total			4,940
1978	Cold storage plant	[1] 12,435	625
	Officers quarters	[2] 80	1,092
	Commissary	[1] 30,000	800
	Warehouse	[1] 210,000	550
	Steam mains	[1] 94,000	1,132
Fiscal year 1978 total			4,199
Total outyear construction			18,000

[1] SF—Square feet.
[2] MN—Men.

AIRMEN OPEN MESS

Mr. PATTEN. Who will utilize the proposed airmen open mess?

General REILLY. This will be utilized principally by the thousands of students undergoing training at Lowry.

Mr. PATTEN. You put a rather low priority on this project. What are you using for this function at the present time?

General REILLY. Colonel Shook.

Colonel SHOOK. It is a World War II temporary building, sir, approximately 24,000 square feet. The configuration is one of the big problems. It is not really set up to be an airmen's open mess and we are hoping to provide a facility with a ballroom, party rooms, a game room and the additional space normally associated with an airmen's open mess. It will support an enlisted population of about 6,000.

AFTERNOON SESSION CLOSED

Mr. PATTEN. I am going to move that the Military Construction Subcommittee hearing this afternoon be held in executive session. This hearing is based on secret material related to Strategic Air Command forces and other similarly classified projects.

Under our new reforms we must have a record vote.

Any discussion?

Mr. DAVIS. This just applies to the discussion that we are going to have on SAC? Is that right?

Mr. NICHOLAS. And classified projects, actually four classified projects in addition to SAC, Mr. Davis.

Mr. DAVIS. Aye.
Mr. PATTEN. Any further discussion?
Mr. NICHOLAS. Dr. Long.
Mr. LONG. Aye.
Mr. NICHOLAS. Mr. McEwen.
Mr. MCEWEN. Aye.
Mr. NICHOLAS. Mr. Obey.
Mr. OBEY. Yes.
Mr. NICHOLAS. Mr. Patten.
Mr. PATTEN. Aye.
Mr. PATTEN. Are there any further questions on Lowry?
Mr. Long?

SCREENING OF OTHER BASES

Mr. LONG. Mr. Patten raised a question which, of course, is close to my heart, since the Army is abandoning Fort Holabird and the Navy is abandoning Bainbridge, both of which are large installations in my area. Has the Air Force looked at those two as alternative locations for this finance center?

General REILLY. Sir, I can't answer on those two specifically.

Colonel Spuhler, to your knowledge have those——

Colonel SPUHLER. To my knowledge, no, sir.

Mr. LONG. Have you been approached in any way or asked to comment on these?

Colonel SPUHLER. No, sir.

General REILLY. Not to our knowledge, sir.

Mr. LONG. This raises a puzzling question, because we were told that everybody had looked at these bases and didn't need them and so on, and they were promptly declared excess by the GSA. Now this is going to be an industrial park and the people in the areas are enraged, particularly in the Holabird area, and here I find you people don't even know about it.

You haven't been asked about it or anything? What is the system for deciding, when a military installation is closing down, whether other branches of the service might find it a good place to have?

General REILLY. Colonel Reed.

Colonel REED. We have advance screening meetings. Perhaps the wrong impression was given. There was no specific study or look at Holabird or Bainbridge to accommodate the Finance and Accounting Center. However, at any time there is a base realinement-closure package, if you would, working we have meetings.

Those personnel who are associated with the planning in the various services meet and we discuss the various actions so that the other services can be apprised of both the coming availability of facilities as well as possible impacts on missions that are being supported by our particular installations that they have in the area.

At these screening meetings then decisions are made as to whether or not there will be further action in order to have the other departments retain the facilities before they are declared excess.

So there is a process that takes place within the Department of Defense to look at these particular items. However, in general we have not in the Air Force been attempting to acquire additional real estate and property which we would have to retain and maintain

and put opening door costs in. In this instance we move onto an active installation which is in being and existing and has the necessary support base going to take care of the accounting and finance center and meets our desire to maximize utilization of existing installations; we also have the question of disruption of the work force which was brought up which does not occur if we stay in the area at Lowry.

In general my knowledge of the facilities is such that nowhere was there a consolidated, adequate 600,000 square foot administrative-type facility, and throughout the system this is one of the things that we were concerned about, whether we would have to go and in fact end up in a dispersed posture and particularly not better off from that standpoint.

Mr. LONG. I hear what you say, but I am not sure I know what you are saying. I hear the words and you could be entirely right, that Fort Holabird or Bainbridge is not the thing for the Air Force, that you have the people in Colorado and you don't want to tell them to go look for other jobs, and move out of town on them.

All that I can understand. But I don't get from you any feeling that there is some really good system whereby the services look at all these things from all points of view before they decide whether or not to build or take advantage of a base being closed down.

Colonel REED. We do screen the properties.

Mr. LONG. You say you screen them. I don't know what that means.

Mr. Davis.

Mr. DAVIS. On the surplus disposal of property in the Defense Department, for instance, all of the other services would get first crack at anything that is found to be excess to the use of any particular department.

If no one else in the Defense Department expresses a desire for it, then it goes to all other Federal agencies and they get a crack at it.

Mr. LONG. I understand the theory, but I am just wondering about the practice. You can't do anything about it if you don't know about it. You can't stake a claim or ask for it if you don't know about it, if you haven't looked at it carefully.

What is the process of screening?

Colonel REED. Sir, as relates to the Accounting and Finance Center there was no considration that I am aware of of relocating it to the two installations you have mentioned. We were aware of Navy reductions at Bainbridge and the Army reductions at Fort Holabird. However, we did not consider in a general sense that these were locations to which we would move the Accounting and Finance Center.

We know of no other mission in the Air Force appropriate to locate at these two installations.

Mr. LONG. You can't be sure if you didn't look at it.

Colonel REED. There are myriad options that we might have exercised that we probably didn't and that is a correct statement. We can't categorically say no, it was a bad idea, without further research.

Mr. LONG. A great many millions of dollars have been put into these two bases and I would like to think that there is some system whereby each of the services could look at all of their new construction projects and ask whether there is some way they could be made unnecessary by utilizing a base which is already there.

Colonel REED. This was done I know——

Mr. LONG. 112 acres, so you would have had ample space for this roughly 15-acre construction project, assuming it is all on the one floor.

General REILLY. Three floors, sir.

Mr. LONG. If it is on three floors, then it is only five acres, so you have plenty of land there.

Colonel REED. Under the assumption that the community support that is provided by the Navy currently in the Bainbridge area would be withdrawn, it would require the Air Force to establish an installation.

Mr. LONG. You have 500 or 600 Wherry houses up there. The Army didn't even look at those, only 6 miles away, before coming in with a number of new housing projects.

It doesn't look to me as if you do have any real system. You make up your minds to build something at Lowry, and you might be right, but you don't want to be bothered by any other disturbing alternatives.

That is the question that comes up in my mind. I just wish I knew a little more about your system of screening. That is what it comes down to.

Mr. DAVIS. I can't conceive that, for a sophisticated facility of this kind, there is any existing facility that would be readily adaptable for this kind of use.

Mr. LONG. You may be right. I am not saying you are wrong in this particular instance, but I haven't gotten from the Air Force any feeling of just how assiduously it goes after all these alternatives.

Colonel REED. I can give you examples where the screening process has resulted in people in other Department of Defense agencies making known needs and requirements.

For example, with our actions at McCoy, the Navy is going to take those facilities that they need, particularly in community support areas, to support their operation in the Orlando area.

The same holds true with the Navy for portions of facilities at Ramey to continue support activities around Ramey, and perhaps other areas in Puerto Rico. These things do occur and the people do make known their needs.

However, I again state that to go to a new installation and open it up and continue it for an operation is an expensive proposition if you can alternatively relocate to an ongoing installation. This is what we were basically faced with if we had gone into an installation that was being greatly reduced or being closed.

Mr. LONG. I couldn't agree with you more, but it didn't keep the Army from moving from Fort Holabird to Fort Huachuca, Ariz., and it didn't keep the Navy from moving from Bainbridge down to Orlando, Fla.

We have wasted a lot of money on these two bases that are being closed down and I would like to think that a maximum effort was made to rescue that money.

I happen to feel strongly, and have heard from people who were in a position to know, that the reasons for moving in both those cases were political rather than economic; that politics played a not inconsiderable role.

I really think we ought to minimize that kind of thing and make the decisions on what is cheapest and best for the military. That means

keeping an open mind and looking around and making sure that before you close something down you try to decide whether it could be used for some other purpose for which you are contemplating the building.

That is all.

Mr. PATTEN. Are there further questions on Lowry?

[No response.]

CLOSED SESSION FOR TRIDENT

Mr. PATTEN. I move that the meeting of the Military Construction Subcommittee on Monday, June 4, be held in executive session. These meetings with the Navy are scheduled to discuss general strategy in the location of naval forces and its relationship to the military construction program, the Trident submarine program, and the strategic reasons for its deployment in the Pacific. The subjects are classified secret or above. A recorded vote is required.

Mr. NICHOLAS. Mr. Davis.

Mr. DAVIS. Aye.

Mr. NICHOLAS. Mr. Long.

Mr. LONG. Aye.

Mr. NICHOLAS. Mr. McEwen.

Mr. MCEWEN. Aye.

Mr. NICHOLAS. Mr. Obey.

Mr. OBEY. Aye.

Mr. NICHOLAS. Mr. Patten.

Mr. PATTEN. Aye.

Mr. PATTEN. We just voted to have a closed session on Monday because of secret Navy testimony.

Mr. MCKAY. All right.

Mr. PATTEN. Record Mr. McKay.

AIR UNIVERSITY

The Air University is located on Maxwell Air Force Base at Montgomery, Alabama. Its mission is to prepare officers for command and staff duties of Air Force units. The assigned activities include Headquarters Air University, Air War College, Air Command and Staff College, Squadron Officers School, and a Tactical Airlift Group (Reserve).

This program contains a request for $5,462,000 for construction in support of the Air University mission.

MAXWELL AIR FORCE BASE, ALA.

Mr. PATTEN. Let us turn to the Air University, and Maxwell Air Force Base, Ala. Insert page 103 in the record.

[The page follows:]

1. DATE	2. DEPARTMENT	FY 1974 MILITARY CONSTRUCTION PROGRAM	3. INSTALLATION
	AF		MAXWELL AIR FORCE BASE

4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY
AIR UNIVERSITY	PNQS	ALABAMA

7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY
ACTIVE	1918	MONTGOMERY	ONE MILE WEST NORTHWEST OF MONTGOMERY, ALABAMA

11. MISSION OR MAJOR FUNCTIONS

TACTICAL AIRLIFT GROUP (RESERVE)
AIR FORCE ROTC HEADQUARTERS
AIR UNIVERSITY HEADQUARTERS
AIR WAR COLLEGE
AIR COMMAND/STAFF COLLEGE
SQUADRON OFFICERS SCHOOL
NON-COMMISSIONED OFFICERS ACADEMY
PROFESSIONAL DEVELOPMENT INSTITUTE
ACADEMIC INSTRUCTOR SCHOOL
DATA SYSTEMS DESIGN CENTER

12. PERSONNEL STRENGTH (Includes Gunter)

	PERMANENT			STUDENTS		SUPPORTED			TOTAL
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	(9)
a. AS OF 31 December 72	1,130	2,636	2,651	1,927	240	139	58	-	8,781
b. PLANNED (End FY 76)	1,032	2,554	2,621	1,927	240	139	58	-	8,571

13. INVENTORY

LAND	ACRES (1)	LAND COST ($000) (2)	IMPROVEMENT ($000) (3)	TOTAL ($000) (4)
a. OWNED	2,850	1,385	83,085	84,470
b. LEASES AND EASEMENTS	1,065	(4) 129	121	250
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 72				84,720
d. AUTHORIZATION NOT YET IN INVENTORY (Excludes $5,007 Family Housing)				3,000
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				5,462
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				6,000
g. GRAND TOTAL (c + d + e + f)				99,182

14. SUMMARY OF INSTALLATION PROJECTS

PROJECT DESIGNATION				AUTHORIZATION PROGRAM		FUNDING PROGRAM	
CATEGORY CODE NO. a	PROJECT TITLE b — Priority	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST ($000) f	SCOPE g	ESTIMATED COST ($000) h
171-153	Add to and Alter NCO Academic Facility (GUNTER) 45		SF	25,800	562	25,800	562
510-001	Add to and Alter Composite Medical Facility I		SF	85,000	4,900	85,000	4,900
	TOTAL				5,462		5,462

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MAXWELL AIR FORCE BASE

Maxwell Air Force Base, Headquarters of the Air University, is located 4 miles west of Montgomery, Alabama. Nearby Gunter Air Force Base is considered as part of the Maxwell complex for programming purposes.

The military construction program presented is for $5,462,000 consisting of two projects as follows:

Item number one is to add to and alter an NCO Academic Facility with a scope of 25,800 SF. NCO academic classes, which began January 1973, are housed in inadequate, improvised interim facilities. These temporary widely dispersed quarters make efficient management and effective control of academic operations very difficult.

The second item is for addition to and alteration of a Composite Medical Facility with a scope of 85,000 SF. This regional hospital services three Air Force bases. Increased patient workload has rendered the existing facility incapable of meeting the community health care needs. With maximum utilization of the existing building, plus expansion into five substandard buildings, overcrowding and delayed medical service prevails.

AU-MAXWELL AFB, ALA.-DESIGN INFORMATION (DESIGN COST ESTIMATED)

PROJECT	DESIGN COST	PERCENT COMPLETE JULY 31, 1973
Add to and Alter NCO Academic Facility	$ 37,500	100
Add to and Alter Composite Medical Facility	330,500	85

SENIOR NCO ACADEMY

Mr. PATTEN. What facilities have been provided for the NCO Academy?

General REILLY. Colonel Ballif.

Colonel BALLIF. A group of World War II temporary dormitories were made available to house the senior NCO Academy students. In addition, some small deteriorated World War II temporary administrative buildings were made available for temporary use by the senior NCO Academy with the thought that future construction would provide permanent facilities for these things.

The building which the current project proposes to add to was an existing service club which is a good permanent structure that was converted into an auditorium and some office space.

The intent is to add seminar rooms for the student body of the senior NCO Academy. The library is also currently housed in a World War II facility which, upon approval of this project, would be turned back to the use of administration for the base and various other activities on the base.

Mr. PATTEN. In other words, your present facilities are not new buildings?

Colonel BALLIF. No, sir, they are World War II temporary structures.

Mr. PATTEN. If the buildings were refurbished, when was this done and at what cost?

Colonel BALLIF. A project for approximately $100,000 of emergency minor construction funds was made available during the past year for refurbishing these buildings in order to make them adequate for use as temporary education facilities.

Mr. PATTEN. Will the requested project satisfy your anticipated requirements?

Colonel BALLIF. Yes, sir.

Mr. PATTEN. How many NCO academies do you have in the Air Force?

Colonel BALLIF. There is a three-tiered system if I could describe it to you briefly. There is only one senior NCO academy which we are addressing at this time. The three-tiered system is composed of leadership schools for the junior enlisted personnel. For the intermediate managers, there is the major command NCO academy but there is just one senior NCO academy for all Air Force personnel in the grades of senior master sergeant and chief master sergeant, the top level NCO grades.

Mr. PATTEN. That answers the question of how the academy at Gunter differs from the others?

Colonel BALLIF. Yes, sir. This is the top level of military training for the enlisted personnel.

Mr. PATTEN. Provide details as to the future use of the six buildings to be retained. Who will occupy them, and where are these functions now going on?

Colonel BALLIF. Yes, sir.

[The information follows:]

NCO ACADEMY FACILITIES UTILIZATION

Details of proposed utilization of six buildings to be retained is as follows:

Building No. 1010 (5,400 ft²): To be utilized by dependent laundry which is now located in building No. 1025, a building containing 1,750 ft² of area. The addition of the 5,400 square feet in building No. 1010 still leaves that function with a deficiency of 1,130 square feet.

Buildings No. 1020 (1,880 ft²), No. 1021 (1,630 ft²), No. 1050 (1,750 ft²), and No. 1051 (1,500 ft²): These facilities are to be utilized by Air Force Data Systems Design Center. These buildings, with 1,880 ft²; 1,630 ft²; 1,750 ft², and 1,500 ft², respectively, will furnish the data systems design center with a total of 6,760 square feet to apply against their present deficiency of 12,000 square feet.

Building No. 1111 (1,750 ft²): To be utilized by 3800 Air Base Wing Headquarters. At the time the NCO academy moved to Gunter AFB, that wing headquarters, which was then occupying the building, was removed to make room for the academy. Subfunctions of the wing headquarters, now located in building Nos. 135, 205, 300, 403, 712, 800, and 900, will return upon project completion.

Mr. PATTEN. What will be the class load at the academy?

Colonel BALLIF. Sir, there will be 5 classes per year, each 9 weeks in length, and there will be 240 students per class for a total of about 1,200 graduates per year; this opposed to a total of 17,000 eligible senior noncommissioned officers who are competing for these slots in the courses.

Mr. PATTEN. How many classes per year for the next 3 years?

Colonel BALLIF. We plan on having five per year as a standard figure throughout the programing period, sir.

COMPOSITE MEDICAL FACILITY—ADDITION AND ALTERATION

Mr. PATTEN. You have a request, General, for an addition and alterations to the composite medical facility at Maxwell. When was the present facility built?

General REILLY. I call on Colonel Baird, please.

Colonel BAIRD. The existing composite medical facility was designed in 1960 and completed in 1964.

Mr. PATTEN. Was the original facility underdesigned, or has there been a significant change in the workload?

Colonel BAIRD. Mr. Chairman, there has been a significant change in the workload primarily in the role that the hospital serves as a regional hospital for the Air Force. The major requirements in this project: Of the total 70,000 square foot addition we are requesting, 55,000 of that addition is to support clinical support space such as laboratories and X-ray departments and dental space.

This particular hospital supports other Air Force hospitals in the area at Columbus Air Force Base; England Air Force Base, La.; and Craig Air Force Base, Ala.

Mr. PATTEN. Provide for the record workload details for the past 8 years and the anticipated load for the next 5 years.

General REILLY. Yes, sir.

[The information follows:]

WORKLOAD FOR MAXWELL AFB MEDICAL FACILITY—USAF REGIONAL HOSPITAL

	Outpatient visits	ADPL [1]	X-ray	Lab procedures [2]	Prescriptions
ACTUAL					
Calendar year:					
1965	223,069	184.4	79,998	131,345	386,763
1966	255,948	195.0	91,131	118,523	415,868
1967	208,723	189.5	115,907	133,197	382,099
1968	207,939	181.4	128,120	152,964	390,454
1969	196,157	164.5	131,999	167,181	326,276
1970	197,550	143.9	131,400	234,403	222,890
1971	218,925	121.4	150,407	360,185	242,306
1972	227,264	123.1	141,769	378,787	260,579
PROJECTED					
Calendar year:					
1973	235,000	114.8	140,000	392,000	264,000
1974	243,000	115.0	141,000	403,500	272,500
1975	249,000	115.0	145,000	410,000	278,500
1976	267,000	115.0	153,000	427,000	297,000
1977	267,000	115.0	157,000	435,000	303,000

[1] Average daily patient load.
[2] Laboratory specimens were reported prior to Jan. 1, 1970. Specimens and procedures are not equal units of measurement.

Mr. PATTEN. Prior to 1968, did your workload increase at a rapid rate? The committee has figures dating from 1968 but it doesn't show a marked increase in the outpatient workload. Without going to specific figures, do you——

Colonel BAIRD. We show a moderate reduction in the total outpatient workload but a marked 300-percent increase in the specialized support space, like laboratory and X-ray and this is the principal reason, that our effort in the design of this project is for these other spaces.

AIR FORCE REGIONAL HOSPITALS

Mr. PATTEN. Where are the other Air Force regional hospitals, and how does the Maxwell facility fit into the total picture?

Colonel BAIRD. There are 12 Air Force regional hospitals. The 11 others are located as follows:

USAF Regional Hospital Carswell, at Fort Worth, Tex.;
USAF Regional Hospital Chanute, at Rantoul, Ill.;
USAF Regional Hospital Eglin, at Fort Walton Beach, Fla.;
Ehrling Bergquist USAF Regional Hospital, at Bellvue, Nebr.;
USAF Regional Hospital Fairchild, at Airway Heights, Wash.;
USAF Regional Hospital MacDill, at Tampa, Fla.;
USAF Regional Hospital March, at Riverside, Calif.;
USAF Regional Hospital Minot, at Minot, N. Dak.;
USAF Regional Hospital Shaw, at Sumter, S.C.;
USAF Regional Hospital Sheppard, at Wichita Falls, Tex.; and
USAF Regional Hospital Westover, at Chicopee Falls, Mass.

This latter hospital in Massachusetts will be closed this coming summer.

Mr. NICHOLAS. As a result of the new Department of Defense overall medical program is the workload at these regional hospitals being reviewed? Do you expect that they will keep basically the same work-

loads you have had heretofore, or are there changes as a result of relying more on other services or other services relying more on your facilities?

Colonel BAIRD. We anticipate that with the new approach to delivery of medical care within a region that the regional hospitals in the Air Force will maintain the current levels of workload.

SOUTHEAST REGION COORDINATED HEALTH CARE

Mr. PATTEN. Can you cite examples of cooperative support and coordinated health care between the hospitals in the Southeast Military Medical Region?

Colonel BAIRD. Yes, sir, I can. May I provide those for the record?

Mr. PATTEN. Yes.

[The information follows:]

EXAMPLES OF COORDINATED HEALTH CARE IN SOUTHEAST MILITARY MEDICAL REGION

The triservice regionalization test program for the Southeast Military Medical Region began on July 1, 1972, and several viable cooperative programs have been realized.

The Third Army Histopathology Center at Fort McPherson, Ga., now provides full specialty laboratory support to Army medical facilities and backup specialty laboratory assistance to Air Force and Navy medical facilities in the region.

Fort Jackson Army Hospital, South Carolina, now provides on-call emergency ambulance helicopter evacuation service for Naval Hospital, Beaufort, S.C., which is in an isolated location.

Naval Regional Medical Center, Charleston, S.C., provides comprehensive support to the Charleston Air Force Base population for total inpatient care and outpatient specialty care.

USAF Medical Center, Keesler, Miss., provides health care support to the Seabees at the Naval Construction Battalion Center, Gulfport, Miss., and to the Navy's Shipbuilding, Conversion and Repair Center, Pascagoula, Miss.

ADDITION TO CONSOLIDATED MEDICAL FACILITY

Mr. PATTEN. Exactly what will the new addition contain? Is it an expansion in the number of beds, or are other facilities and services to be included?

Colonel BAIRD. The expansion will contain a minor increase in space for outpatient clinics. This will consist of less than 5,000 square feet. We will also provide an increase of approximately 55,000 square feet of addition for space for additional dental treatment rooms and clinical specialty services such as laboratory and X-ray departments.

Mr. PATTEN. How much will be devoted to administrative space in this addition?

Colonel BAIRD. I will have to provide that for the record, sir.

[The information follows:]

ADMINISTRATIVE SPACE IN MAXWELL AFB MEDICAL ADDITION

The proposed addition and alteration project for USAF Regional Hospital Maxwell will convert 2,535 square feet of administrative space to medical treatment space in the existing facility. This lost administrative space will be regained and additional administrative space requirements will be met by the 8,500 square feet total administrative space designed into the proposed addition. This will result in a composite medical facility which has 6 percent of the total facility designated as administrative space. This is comparable to the 6 or 7 percent space allocation for administrative space which has been included in the regional hospitals programed in the fiscal year 1973 military construction program.

Mr. PATTEN. Will this complete your requirement?
Colonel BAIRD. Yes, sir; it will.
Mr. PATTEN. Any questions?

NCO ACADEMIC FACILITY ADDITION AND ALTERATION

Mr. DAVIS. Yes, I have a couple, Mr. Chairman.

Getting back to this NCO academic facility, do I interpret this correctly?

Up above it refers to 25,800 square feet and down below you show a total requirement of 35,900, and I can't quite get these figures to——

General REILLY. May I attempt to explain them.

Mr. DAVIS. Yes, if you would.

General REILLY. Sir, we have a requirement for 35,900 square feet of space. At the present time, we have what was once the service club at the base, which has been converted to a very adequate NCO facility. However, it is not large enough. At the present time, we are using 23,210 square feet of substandard space.

Now, we simply propose to add 16,500 ft^2 to the existing facility, and to alter 9,300 ft^2 of existing space, to provide a total of 35,900 ft^2. The 10,100 is existing and adequate. The difference between that and the 35,900 is the deficiency of 25,800.

Mr. DAVIS. Well, it wouldn't be considered all bad to not have all of these classrooms under the same roof, would it?

General REILLY. Not necessarily, sir. The facilities there now are just not properly configured and suited to first-class educational requirements. Some of the buildings that are now existing can be used for other miscellaneous uses on the base, but not for first-class academic use.

We are attempting to consolidate in the one facility. We have a very good base now, and with some alterations and additions to that, we can provide the total requirement.

Mr. DAVIS. What type of buildings are these that are now being used? Are they permanent construction?

General REILLY. Colonel Ballif.

Colonel BALLIF. Sir, these are a group of old World War II temporary mobilization type structures, single story buildings, one large room in each complex. The whole compound, including the dormitories and all these facilities, was a temporary World War II training setup.

These were administrative buildings or warehouses. Some of these were converted from warehouse space and supply issue points for use as classrooms and so forth with only minor modifications with the hope and expectation of having permanent training facilities provided for these items.

For example, we have a requirement for 20 seminar rooms to support the student body of the senior NCO academy. As it is now, temporary partitions are having to be placed in some of these structures, and it is incongruous to try and conduct two seminars within the same structure with only temporary support or dividers between each room.

The intent is to consolidate these into seminar rooms which can be used for the 20 seminars that are organized under the school structure.

Mr. DAVIS. I am getting concerned because 56 or 57 percent out of every one of our dollars is going now for personnel costs, and we do

have these urgent hardware needs. We do need to be very careful about what we do in constructing buildings in order to achieve exactly ideal conditions. I am wondering how much harm would be done to let this go for a little while longer and meet some of our urgent requirements first.

General REILLY. Sir, we feel in view of the importance of this particular school that it is most essential that we provide adequate facilities. They are now utilizing the existing what used to be the old service club. So really this is the only new construction we have requested with the exception of one small minor construction project in providing what is now the school for our most elite noncommissioned officers. As far as we know, this will satisfy our construction requirements.

COMPOSITE MEDICAL FACILITY

Mr. DAVIS. For the record, I think I would like to see an analysis of your caseload at the medical facility at Maxwell. I have to be concerned with the matter that Mr. Long has mentioned a number of times.

There is a large retired population in the Maxwell Air Force area. I just want to be sure that we aren't going to be spending almost $5 million largely to accommodate the retired population in the area.

General REILLY. Yes, sir; we can give you that assurance.

Mr. DAVIS. If we can get an analysis of that, we would like to have a breakdown of the existing caseloads for the last, let us say, 3 years so that we could have that as a basis for consideration of the urgency of this matter.

General REILLY. Yes, sir.

[The information follows:]

ANALYSIS OF CASELOAD AT USAF REGIONAL HOSPITAL MAXWELL

The USAF Regional Hospital Maxwell is providing total hea'th care services to eligible beneficiaries in the local military community and specialty health care services to the beneficiaries in its medical region, which includes the USAF hospital at Moody AFB, Ga., and the USAF clinic at Craig AFB, Ala.

The outpatient components of the workload for the past 3 years, which is measured in outpatient visits per year, reflects that this workload is attributable to groups of beneficiaries as follows:

OUTPATIENT VISITS

	Total	Active duty military and dependents	Retired military and dependents
Calendar year:			
1970	197,550	147,742	49,808
1971	218,925	159,987	58,936
1972	227,264	164,832	62,432

The inpatient component of the workload for the past 3 years, which is measured in average daily patient load, reflects that this workload is attributable to groups of beneficiaries as follows:

AVERAGE DAILY PATIENT LOAD (INPATIENT)

	Total	Active duty military and dependents	Retired military and dependents
Calendar year:			
1970	143.9	93.6	50.3
1971	121.4	76.5	44.9
1972	123.1	68.6	54.5

This military construction project has been proposed to relieve the critical shortage of outpatient clinical and ancillary support space at this regional hospital. The scope of the project and the design were revalidated based on estimated calendar year 1977 workloads for active duty military personnel and their dependents, plus 5 percent as authorized by DOD for nonteaching hospitals to accommodate retired military personnel and their dependents.

Mr. McEWEN. Mr. Chairman.

Mr. PATTEN. Mr. McEwen.

Mr. McEWEN. I would like to associate myself with the concern that the gentleman from Wisconsin has expressed. Of course, Mr. Chairman, he is a former Navy commander and I am an old sergeant.

Mr. DAVIS. No, not commander; lieutenant senior grade.

PRIORITY OF FAMILY HOUSING

Mr. McEWEN. As an old sergeant I would like to see something for the NCO's. That appeals to me. But, General, what concerns me, speaking just as one member of this committee, is how we can get so many projects that admittedly are desirable—how essential I am not sure—and can't face up to the housing needs of the military and their dependents.

Now, we are all products of our own background, our own experience, so if I may, I would briefly say what mine is with regard to military housing. I struggled for years, and then thanks to the Armed Services Committee and this subcommittee, before I was on it, we worked out a solution to family housing for one military post in my district. People were living in 30° below zero weather in Lanham Act houses built in 1941 for a 6-year life cycle. They were going into their sixth cycle. They had 180° pipes exposed that little children were burned on. It would have been bad housing anywhere, but anywhere other than on a military post it would have looked like what it really was, a slum area, but it was kept painted and policed up with the military well-kept look.

It was a struggle, believe me. We are going to break ground this Sunday to get this housing underway. Also, I have an air base in my district, Plattsburgh AFB, where people simply do not have room—off the record.

[Discussion off the record.]

Mr. McEWEN. Back on the record.

But they desperately need housing. As I say, as an old sergeant I would like to see facilities for NCO's. I would like to see in time a suitable facility here but if we have a choice between people living in World War II structures, military and their dependents, or military

possibly utilizing these structures during their working hours, I think we ought to be giving priority to housing.

We are talking about an all-volunteer service, General, I don't know how we are going to keep people in the service if we don't provide them with decent housing. I have had both officers and enlisted men tell me that their wives have cried when they found where they had to live.

We aren't going to find enough money to pay salaries to retain people in the service if we compel them to live in substandard housing.

This may not have been the point, Mr. Chairman, to deliver my views on this, but I just want to say, as one member of this committee, I am going to look very carefully at every single project until such time as we meet the housing needs of the people in the services and their dependents. That is the No. 1 priority to me unless the project is absolutely essential to the performance of the mission or the security of the United States.

Mr. LONG. Would the gentleman yield? I think he has made a very good statement.

Who makes the decision to build these buildings as opposed to housing? I have a suspicion that the top officers, generals and colonels and so forth who want nice space around them are making the decisions. The poor enlisted people are not in on that decision. They have to live with it. I might point out, too, in support of what the gentleman, Mr. McEwen said, out of 168 hours in a week a person spends 40 hours in an office on the job and 128 hours back home, or something like that. Consequently, housing is, so far as moral and standard of life and enjoyment and everything else, just quantitatively a very important factor compared to a lot of buildings that I suspect have dubious or borderline justification.

Mr. MCKAY. Mr. Chairman, would you yield?

Maybe this is a question for the chaplain. When these counseling services on divorce come up, does this subject ever come up?

Colonel MOORE. Yes, sir, it has come up.

Mr. MCKAY. Do you see it as a major factor in family relationships?

Colonel MOORE. Any time the wife is not happy, Mr. McKay, it is a major factor. Inadequate housing leads to unhappy wives and therefore unhappy families.

Mr. MCKAY. Do you see this growing as a major issue in divorce conditions?

Colonel MOORE. No, sir, it is better than it was. This does not come up as often as it did before.

General REILLY. May I comment on that?

Mr. PATTEN. General.

General REILLY. Again, I am probably a little parochial but no one feels more strongly than I about the need for additional family housing, and the improvement of that which we already have. However, our family housing requirements are a part of a Department of Defense family housing budget as opposed to being a part of the Air Force budget per se. These projects we are looking at here are in direct competition with all other moneys in the total Air Force budget.

Each year we seek to get the maximum we can within the overall housing budget. Again, that being controlled by the DOD total budget. We think that we are far behind in family housing. I think our Chief of Staff has repeatedly testified on the high priority that he assigns to family housing and how essential it is to a strong Air Force. The Air Force is faced with a very difficult task in weighing the many factors that influence the all-volunteer force and with limited resources determining what should be put into family housing as opposed to other incentives.

Earlier when we covered on the first day our family housing program, we pointed to the fact that in the 1974 program we are giving greater emphasis to fixing up our existing units. Our budget of 1,800 new units with the exception of 2 units is all for enlisted personnel. That is where we are putting the emphasis.

We have been operating under a very difficult system, if I may say so, the Department of Defense criteria under which we can build houses. There is a great deal of constraint on just what we can do. With houses costing right now $24,000 apiece, if you start talking in terms of large quantities, 10,000 houses for example, we are running into tremendous appropriated dollar requirements. Our overall budget within the Air Force and within the Department of Defense has just not been able to accommodate that. I think we share your view of the essentiality of adequate housing for our people. If we can get housing in the community at reasonable price, that is just great. We cannot always do that.

Mr. McEwen. Let me say that I am sorry that I missed that part of these hearings. But I was in another subcommittee in the process of marking up a bill. I had to be away from this subcommittee when you were on this subject.

I am delighted that your report indicates the concern there is over housing. I think all of us are willing, whatever our work mission, to take some hardships. But when it comes to our homes, our families, this is one place where it should be as pleasant as it possibly can be made.

General Reilly. That is right.

Mr. McEwen. I think a man will take a good deal of interest in his work if he has good accommodations for his family. I was interested in the question Mr. McKay raised and the chaplain's response. I am sure, in what you said about divorces. Colonel, that housing is a point of friction. A man wants a military career and a wife wants a home. I would like to think that he could pursue that military career and have good housing for his wife, not have her saying, "Get out of the militarv so we can have a decent house like other people."

Mr. Patten. In conclusion, General, I think the last speaker was a little biased because he keeps looking at the National Guard place at Camp Drum. We have a million less people in the military, and with what we have poured into this program in the last 5 years we should be making a showing.

General Reilly. Yes, sir, we are.

Mr. Patten. We had 2½ million people back in 1968.

Mr. McKay. Mr. Chairman, would you yield to a motion?

Mr. Patten. I second the motion. Two o'clock.

AFTERNOON SESSION

CLOSED SESSION

Mr. PATTEN. The committee will come to order.

ALASKAN AIR COMMAND

Mr. PATTEN. We will take up Alaskan Air Command.
Insert page 106 in the record.
[The information follows:]

The Alaskan Air Command provides combat-ready forces, defense weapons system, aircraft control and warning elements, and air defense forces within Alaska for employment under the operational control of Command, Alaska NORAD/CONAD region. It also provides logistical support for the Strategic Air Command, the Military Airlift Command, the Command of The Alaskan Sea Frontier and the United States Army. This program provides $8,658,000 at five locations.

DEPARTMENT OF THE AIR FORCE MILITARY CONSTRUCTION PROGRAM FISCAL YEAR 1974

Alaskan Air Command—Proposed program

Installation:	*In thousands of dollars*
Eielson Air Force Base, Alaska	1, 557
Various locations, Alaska	(7, 101)
Cape Newenham Air Force Station	5, 403
Indian Mountain Air Force Station	397
Shemya Air Force Station	956
Sparrevohn Air Force Station	345
Total	8, 658

Mr. PATTEN. Why do you need two major bases, Eielson and Elmendorf, in Alaska?

General REILLY. May I ask Colonel Reed to address our Elmendorf and Eielson requirements.

Colonel REED. The requirement for two bases in Alaska is predicated on the decision of what forces we need to operate in the Alaskan area. Eielson Air Base primarily supports strategic reconnaissance and strategic missions which are placed there on a permanent basis and rotational basis.

The areas of operations particularly for these reconnaissance missions are such that the Northern Atlantic location is required.

At Elmendorf we primarily support a TAC operation with tactical fighters, an airlift operation and major command headquarters for the Alaskan Air Command. These forces are assigned in coordination with requirements for the defense posture in the area and neither base could absorb the total mission of either one.

EIELSON AIR FORCE BASE, ALASKA

Mr. PATTEN. We turn now to Eielson Air Force Base.
[The information follows:]